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POPULATION CHANGES AMONG THE NORTHERN
PLAINS INDIANS

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INTRODUCTION

OUR objectives in this study are to determine the relative sizes of certain American Indian tribes during the period of the fur trade, and later to observe population trends during the reservation period. In a future publication some consideration will be given to sex and age ratios. The tribes chosen occupied the country comprising the drainages of the Saskatchewan River in Canada and of the Upper Missouri River in the United States. Data for the first period are found in the reports and diaries of explorers and traders, supplemented by later military and governmental surveys. Those for the reservation period are in registration rolls, available in printed reports and documents on file in the appropriate administrative departments of the United States and Canadian Governments.

Previous studies of Indian populations were concerned with establishing definite numbers for fixed dates, whereas this study views the available data in time sequence. We are concerned with population change, rather than absolute size.

The tribes studied are:

1. The so-called Blackfoot group, composed of Blackfoot, Blood, Piegan, Gros Ventre (Atsina), and Sarsi.
2. The Assiniboin, composed of several divisions, each of which consists of numerous bands.
3. The Western Cree, distinguished from the Eastern Cree by their location west of Lake Winnipeg and south of the North Saskatchewan River. For the most part, these Cree became Plains Indians before the close of the fur trade period and wandered about in divisions and bands similar to the Assiniboin.

The writer is indebted to Mrs. R. D. Sanderson, Honorary Life Member of the American Museum of Natural History, New York, for compiling the tables relative to the reservation period.

THE FUR TRADE PERIOD: 1670-1870

The history of these Indian tribes may be considered under two main heads: first, a long period of white contact characterized by the fur trade, dating roughly from 1670 to 1870. This is followed by the reservation period, which in the United States, dates from about 1850 to the present, but in Canada from 1870. It is obvious that no sharp line can be drawn between the fur trade and reservation periods, since even in the first, economic and other conditions were far from constant. From one point of view, the whole period from 1670 to the present may be looked upon as a time of successive adjustments to changes in white culture.

It so happened that the traders needed accurate estimates of Indian population in order to forecast the consumption of trade goods. The usual method of counting was by tents, or

tipis. Naturally, each tent stood for a social unit and was occupied by a group of individuals, the average number of which could be ascertained with fair reliability.

THE BLACKFOOT GROUP

In Table 1 we present the important data for the tribes of the Blackfoot group.¹ It seems best to treat these separately because the known tribal divisions have been consistently maintained throughout the period. Further, they have operated in large compact bodies and hence there is reason to believe the observations on their populations are more accurate than those for the Assiniboin and Cree. It will be noted that our tabulation presents both the authorities and the dates in chronological order. Some additional estimates are found in the literature, but these do not seem to modify the population picture as presented in the table. Some of these observers give both the number of tents, and the number of warriors, or men, and occasionally estimates of the total population.

TABLE 1. THE BLACKFOOT GROUP

	<i>Tents</i>					<i>Men</i>				
	Black-foot	Blood	Pie-gan	Gros Ventre	Sarsi	Black-foot	Blood	Pie-gan	Gros Ventre	Sarsi
1754 Hendry	—	—	—	322	—	—	—	—	—	—
1776 Henry the elder	—	—	150	—	—	—	—	—	—	—
1789 Mackenzie	—	50	—	—	35	800	250	1200	600	120
1799 Thompson	—	—	—	70	90	—	—	—	700*	650*
1805 Lewis and Clark	—	—	—	260	—	—	—	—	660	—
1809 Henry†	200	100	350	80	90	500	200	700	240	150
1819 Richardson	350	300	400	—	—	—	—	—	500	150
1835 Jenness	300	400	500	250	100	—	—	—	—	—
1853 Stevens	250	350	350	360	—	625	875	875	900	—
1857 U.S. Report	200	300	350	350	—	—	—	—	—	—
1858 Hind	300	250	400	400	45	—	—	—	—	—
1858 Vaughan	150	300	460	265	—	260	500	900	400	—
1859 Palliser	700	350	550	—	180	600*	2800*	4400*	—	1100*
1864 U.S. Report	350	270	400	233	—	—	—	—	—	—

* Total Population.

† Duncan M'Gillivray, 1808, gives total Blackfoot, Blood, and Piegan as 700 tents, Gros Ventre 200 and Sarsi, 60.

The number of tents as given indicates certain trends. Thus the Sarsi, Blackfoot, Blood, and Piegan show two peaks, one about 1835, the other about 1859. The Gros Ventre decline after 1780, again reaching a peak about 1858.

An important question concerns the reliability of these data. We note first that the tent counts are given in round numbers and thus are not actual counts. There are a few excep-

¹ The principal sources for the population statistics used in this study appear at the end of the paper.

tions to this, but in the main we must accept them as estimates. On the other hand, there is a certain consistency in the ratings given the several tribes. While it is possible that some of the estimates may have been taken from the same sources, we notice differences in them, suggesting that each writer attempted to make an original estimate. The data may be tested by their consistent relative sizes. If the reader arranges the tribes in each column by rank, the uniformity will be obvious. Of the Blackfoot tribes the Piegan lead. The early observers consider the Blackfoot more numerous than the Blood, but after 1870 this relation is reversed. The lead of the Piegan is at least one and one-quarter centuries old and promises to continue indefinitely.

The Gros Ventre deserve special consideration because they are rated low before 1850, then high until 1858, after which they are again placed at the bottom of the list. We are unable to explain this shift, though if we accept Hendry's account for 1754, we have an earlier crest of the population wave for this tribe. At this point note should be taken of the statements of Burpee, the editor of the journals left by Hendry and Cocking. According to him, Hendry and Cocking met Blackfoot Indians after they crossed the South Saskatchewan. However, Cocking states that the Indians he met were Waterfall Indians, one of the early names for Gros Ventre. There can be no reasonable doubt as to the correctness of this identification. In a future publication we expect to present the evidence in full, not only to confirm Cocking's statement, but to make it reasonably certain that Hendry met the same Indians in 1754. So, we accept Hendry's population data as applying to the Gros Ventre.

There is historical evidence that about 1780 smallpox carried away more than half the Gros Ventre. It is possible, then, that about 1850 they had regained their former strength, after which smallpox and other calamities again reduced their numbers. Thus Duncan M'Gillivray writes (1809), "From the source of the Saskatchewan River till it empties itself into Lac Ouinipigue, the natives may be said to be numerous, the population has very much increased since the year of the smallpox in 1781, which destroyed them by the thousands."

We conclude that the observed consistency in relative population numbers and the historical explanations for certain observed fluctuations indicate a fair degree of reliability for the statistics in Table 1.

Since for the most part the sizes of groups are given in terms of tents and warriors, and since later estimates are given in terms of the total population, it is desirable to find a formula by which tents and warriors can be translated into total populations. The earlier writers seem to have regarded the average tent population as 8-10 persons thus: Richardson, 10; Lewis and Clark, 9-10; Hind 8; and Vaughan, 7-8.² The use of such an average ratio would be legitimate in estimating the total tribal populations.

These observers are less definite as to the number of warriors, but since some give both tents and warriors, a ratio may be calculated: as, Mackenzie, 4-5 warriors per tent; Henry,

² A recent visitor to the Plains Cree, Mr. D. Mandelbaum, reports his informants as stating that 10-12 persons were considered the proper number to be housed in a tipi.

2-5; Stevens, 2-5; Vaughan, 3-5. These observers rate specific tribes differently indicating that tribal custom determined the differences. Cultural data reveal tribal standard sizes in tipis. Henry (1809) gives two thousand tents as the total for the whole area, rating warriors as 2-3 per tent, women 6-7, and the total number of persons about 23 per tent. This seems high, but seven women to thirteen children are not excessive.

Morse (1822) presents some statistics for warriors and total population (Table 2).

TABLE 2. PROPORTION OF WARRIORS TO THE WHOLE NUMBER
(AFTER MORSE)

	Warriors	Population	Proportion
Indians south of Red River	13,229	46,370	about 3½
Winnebago	900	5,800	6½
Menomini	600	3,900	6½
Indians in Ohio	753	2,257	3
Missouri	7,560	30,000	4
On the west side of the Rocky Mountains	—	—	6

Thus it appears that both opinion and data favor 8-10 persons per tent, 2-3 warriors per tent, and the total population as 3-6 times the number of warriors. These ratios have been used when necessary to translate tents and warriors into total populations.

Now, turning back to our main problem, populations in the Blackfoot group, we present the accompanying estimate (Table 3). There is good reason to believe these populations increased rapidly between 1809 and 1871, but Palliser's numbers may be too high and Henry's may be too low. However, since Henry says these tribes were increasing rapidly in 1809, the picture is relatively correct. For example, Henry says of the Gros Ventre that the proportion of young men is greater among them than in other tribes and that they are rapidly recovering their losses from smallpox. Of the Blackfoot he says, "Smallpox has destroyed great numbers; however, they are still very numerous, and increasing fast." The estimates in the table for 1880-1884 are reservation counts and so indicate the approximate strength of these tribes at that time.

TABLE 3. SUMMARY FOR THE BLACKFOOT GROUP

	Blackfoot, Blood, Piegan, Sarsi	Gros Ventre	Total
1780 Mooney	15,700	3,000	18,700
1809 Henry (estimate)	4,400	960	5,360
1858 Palliser	8,900	2,100	11,000
1871 Canada Official Report	11,750	—	—
1880 U. S. and Canada	7,500	1,100	8,600
1882 U. S. and Canada	9,369	950	10,319
1884 U. S. and Canada	8,109	1,150	9,259

Thus we can regard the data from all sources as indicating a Blackfoot strength in 1780 of about 15,000 but soon reduced by smallpox: by 1850 they recovered part of their losses,

probably reaching the peak about 1870. In a future publication the history of the Gros Ventre will be presented, from which we conclude that in 1850 they numbered between 2,000 and 3,000.

THE ASSINIBOIN

The data for the Assiniboin are less satisfactory. While they were a relatively large group, they lived in a number of separate divisions with numerous subdivisions. Few of the early observers were in contact with all these divisions, so we cannot be sure that any of the early estimates include the entire group. However, we have tabulated the important statements, as in the previous table. When first discovered these Indians seem to have occupied the country immediately west of Lake Winnipeg, along the Assiniboin River and the valley of the lower Red River. Shortly after the fur trade began, they seem to have expanded along the North Saskatchewan River and again in a southwesterly direction toward the Missouri River. However, the usual distinctions made are between Plains and Strongwood Assiniboin. It is apparent from Table 4, that at no time were the Strongwood considered more than a minor division, the main body having the characteristics of Plains Indians.

TABLE 4. THE ASSINIBOIN

		Plains	Strongwood	Tents	Populations
1776	Henry	300	—	300	—
1780	Mackenzie	130	70	200	—
1799	Thompson	—	—	400	3200
1800	Hayden	250	—	250	—
1809	Henry*	850	30	880	8000
1829	Porter	—	—	—	8000
1836	Gallatin	—	—	—	6000
1838	Denig†	—	—	1200	9000
1842	Hind	300	80	380	—
1843	U. S. Report	—	—	—	7000
1845	De Smet	600	50	650‡	—
1854	Denig	520	—	520	—
1857	U. S. Report	—	—	450	3700
1858	Palliser	150	70	220§	1350§
1863	Hayden	—	—	250	—

* Also gives 2000 warriors.

† Denig says smallpox shortly reduced them to 400 tents.

‡ At another time De Smet says 1500 tents.

§ For Canada only.

|| Based on tent ratios.

If we consider the data in the table only, it suggests that by 1809 they had doubled their number, and reached their maximum about 1838. There is historical evidence for heavy losses by smallpox at various times, especially around 1838. We note also that after 1800

many of the Assiniboin hunted in the northern United States, and in consequence we have estimates based on observations in both countries. We suspect that estimates made in United States territory would omit many of the Assiniboin living in Canada, and that Canadian estimates would omit those habitually living in the Missouri River country. De Smet, the writer probably most familiar with the country on both sides of the international boundary line, once estimated the total Assiniboin at 1500 tents. Denig, in 1838 estimated 1200 tents.

As a summary review we offer Table 5 which presents the outline of Assiniboin population history. There is no reason why the maximum estimate should not have been realized as the Assiniboin expanded geographically. We shall see presently that the Cree, who displaced the Assiniboin, received equally high ratings. Denig, our best authority for the period 1838-1854, says that smallpox almost destroyed the power of the Assiniboin, after which the pressure of other tribes, reduction of the buffalo, etc., kept them down. Historical data suggest the last maximum expansion in territory at about 1838, and it appears that this expansion was accompanied by an increase in population, reaching a peak about the same date. Before 1780 there was an earlier period of expansion, when Mooney estimated the maximum at 10,000. We consider this a reasonable figure.

TABLE 5. SUMMARY OF ASSINIBOIN POPULATION

	United States	Canada	Total
1780 Mooney	—	—	10,000
1809 Henry	—	—	8,000
1838 Denig	—	—	9,000
1857 U. S. Reports	3,700	—	—
1858 Palliser	—	1,350	—
1863 Hayden	1,500	—	—
1869 U. S. Reports	2,640	—	—
1874 U. S. Reports	—	—	4,698
1884 Official Reports	2,195	1,945	4,140

THE WESTERN CREE

As previously stated, we have included in this study the Western Cree, chiefly those residing in the plains west of Lake Winnipeg. The details of their distribution will be considered in a future publication, but it may be noted here that most of the Cree occupying the Saskatchewan plains migrated there after the establishment of trading posts on Hudson Bay. These migrations, and the fact that we are dealing with only a part of the Cree, naturally complicate our problem. Further, we are concerned with Cree in transition from a Woodland to a Plains order of life. In general, the Western Cree are designated under two headings: Plains and Strongwood. However, Hayden (1853) enumerates three groups as follows:

True Plains Cree	680 tents
Transition Cree	200 tents
Wood Cree	200 tents

As indicated in Table 6, the first population estimates are those given by Jesuit missionaries, approximately 9000. However, it is difficult to decide just which divisions of the Cree are included in this estimate. For the years 1832-1845, the estimates range from 600-800 tents and because of their similarity may be considered reasonably accurate. We may conclude, therefore, that their maximum number was realized about 1860. It should be noted, nevertheless, that Butler regards them as having been reduced to 7000 in 1873.

TABLE 6. THE WESTERN CREE

		Plains	Strongwood	Tents	Population
1660	Jesuit Relations	—	—	—	9,000
1776	Hayden	—	—	800	—
1789	Mackenzie	110	200	310	—
1809	Henry	300	—	—	—
1833	Maximilian	—	—	600-800	—
1835	Hind	—	—	400-500	—
1842	Hind	400	200	600	—
1845	De Smet	—	—	600	—
1853	Hayden	880	200	1,080	—
1858	Hind	150	—	—	—
1858	Palliser	—	—	—	11,500
1860	Hector and Vaux	—	—	—	12,500

Some of the irregularities in estimates are probably due to smallpox which was particularly severe between 1776-1781, and again around 1838. History places the great territorial expansion of the Western Cree as culminating about 1860-1870, and the population data suggest this as the time of maximum numbers.

SUMMARY OF THE FUR TRADE PERIOD

Judged by the standards of modern population statistics, the data we have used may seem contemptible. On the other hand, these data have been subjected to certain checks and found to give consistent trends in tribal man-power during a period when peace rarely prevailed in all parts of the area simultaneously. There are ample historical data for the rise and fall of tribal powers, and the displacement of the weaker by the stronger. The absolute population figures we have listed are to be taken as subject to relatively large errors, but seem to express relative size with much greater precision. Further, they reveal periodic fluctuations as the slump after the smallpox of 1780 and again after 1838.

Since there have been displacements among these tribes, the successive grand totals for the area as a whole are presented in Table 7. One possible check may be the density of this population. Roughly, the area comprises 220,000 square miles, and the table gives the

approximate square miles per capita. Mooney's total United States Plains population density in 1780 was about 7.31+ per capita. Further comment may await the presentation of reservation statistics.

TABLE 7. TOTAL POPULATION IN THE AREA

	Blackfoot, Blood, Piegan	Gros Ventre	Sarsi	Assiniboin	Western Cree	Total	Density†
1780	15,000	3,000	700	10,000	—	28,700	7.6+
1809	3,750*	960	650*	8,000	3,000*	16,360	13.5+
1858	7,800	2,100	1,100	3,120	11,500	25,620	8.5+
1882	8,746	950	423	4,140	10,032	24,291	8.9+‡
1899	4,932	547	213	2,935	6,807	15,434	14.2+‡

* Based upon tent ratios

† Square miles per capita.

‡ As these Indians are now on reservation, density has little significance save as a check on the preceding data.

CHANGES IN POPULATION AS RECORDED IN OFFICIAL REPORTS FROM THE INDIAN DEPARTMENTS OF THE UNITED STATES AND CANADA

Somewhat in contrast to the preceding data are the official records of the various Indian agencies in the United States and Canada. For the tribes of this area the Canadian records begin about 1871, but the regular, published population tables begin with 1884. In the United States the reports give some population data beginning with 1850, but the most satisfactory ratings begin with 1880. Although it is apparent that the data from the two countries are comparable, our experience gives us the impression that the Canadian data are more accurate. After the treaties settled the Canadian Indians on reserves, annuities were paid regularly, and the rolls re-checked each year. In the United States such payments were irregular and the agency rolls were not considered of equal importance.

Our method of procedure has been to tabulate the available annual population data for the separate reserves, ninety-six in all. The Canadian policy was to settle each distinct band on a reservation of its own, and in consequence, we are able to tabulate populations in the same way. However, in the United States populations are given by agencies. Hence a comparison between the two must be made in terms of agencies. In a few cases bands were weakened by transfers to other bands, but usually within the same jurisdictions; hence, the agency totals were not disturbed thereby. Individuals carried on the rolls as on leave were counted. There was some intermarriage, but this seemed to be at random and so should equalize in the totals. A few bands were hopelessly mixed Cree, Ojibwa, and some Assiniboin, but these were not discarded, since we are not attempting to set up differences between pure tribal lines, but observing the population trends for each band. It is upon the observed uniformity in these trends that we base our conclusions.

THE BLACKFOOT GROUP

Under the Blackfoot group we have listed the same tribes as in the preceding section and while our original tables give the populations annually, we present here tabulations for the most part at five year intervals (Table 8). These tables give the actual reading for the year. It will be noted that during the years 1871-1881, both the United States and Canadian reports gave the total group population only. The Canadian total populations for 1875 to 1882 show a sharp rise for 1880, but this seems to be due to the extension of control

TABLE 8. THE RESERVATION BLACKFOOT GROUP

	Gros Ventre	Black- foot	Blood	U. S. Piegan	Canada Piegan	Sarsi	U. S. Total*	Canada Total
1871	1200	4000	2000	—	3000	—	—	—
1874	1000	—	—	2450	—	—	—	—
1875	—	—	—	—	—	—	7200	4622
1876	—	—	—	—	—	—	7200	4937
1877	—	—	—	—	—	—	7300	5050
1878	1000	—	—	—	—	—	7600	4928
1879	1135	—	—	—	—	—	7500	6159
1880	1148	—	—	—	—	—	7500	7549
1881	1100	—	—	—	—	—	—	7789
1882	950	2255	3542	—	849	423	—	7069
1883	950	2158	2589	—	893	436	—	6076
1884	1150	2173	2278	2300	929	429	3450	5809
1889	770	1804	2097	2293	907	336	3063	5144
1894	574	1308	1494	1811	780	234	2385	3816
1899	547	1096	1278	2022	536	213	2569	3123
1904	553	845	1196	2059	506	206	2612	2753
1909	510	795	1174	2268	471	197	2778	2637
1914	570	737	1154	2743	436	188	3313	2515
1918	567	726	1161	2752	415	193	3319	2495
1924	582	695	1158	3124	383	160	3706	2396
1929	650	724	1204	3533	402	146	4183	2476
1933	716	—	—	3947	—	—	4663	—

* U. S. total, 1875-1881, includes Gros Ventre and Sarsi; the Canadian total omits Gros Ventre.

over the western part of the area and the enforcement of registration annually. Further, both the United States and Canadian authorities were, in part, counting the same tribes. Thus the Piegan seem to have been in the habit of camping in two divisions and eventually one of these settled in the United States, the other in Canada, but in the earlier reports all of the Piegan were claimed by each government. Before 1870, the Gros Ventre had withdrawn from Canada, making no claim to lands in that country and so were not considered as belonging to the Canadian Blackfoot group. On the other hand, the United States Reports not only include them, but the Sarsi also.

Turning now to Table 8, the population trend from 1880 to the present is easily observed. At the outset all decline, but with the possible exception of the Sarsi eventually start upward. The general nature of this trend is apparent in the totals for the tribes living in the United States. For those in Canada, the decline continues almost to the present. The United States Piegan show a slight loss from 1874 to 1884, reaching their lowest about 1900, since which time they have gained steadily, approximately doubling in thirty-five years.

TABLE 9. THE RESERVATION ASSINIBOIN

	Morley	Indian	Battle-	Moose	Edmon-	Canada	Ft.	Ft.	U. S.
		Head	ford	Mt.	ton	Total	Peck	Belknap	Total
1874	—	—	—	—	—	—	1998	2700	4698
1875	—	—	—	—	—	1215	—	—	5498
1879	—	—	—	—	—	—	1469	977	2446
1884*	621	251	249	210	614	1945	1195	1000	2195
1889	588	248	228	148	631	1843	705	830	1535
1894	647	210	154	121	631	1763	710	782	1492
1899	594	213	89	75	588	1559	660	716	1376
1904	641	210	73	196	601	1721	573	699	1272
1909	661	207	88	203	585	1744	610	643	1253
1914	659	204	84	213	563	1723	640‡	639	1279
1919†	670	200	93	213	597	1773	752	638	1390
1924	607	204	98	220	577	1706	809	597	1406
1929	611	217	109	248	628	1813	—	601§	—
1934	—	—	—	—	—	—	1406	647	2108

* After this date Canadian and United States Assiniboin are counted separately.

† All Canadian data are for the year 1917; United States data for 1918.

‡ For 1916.

§ For 1930.

THE RESERVATION ASSINIBOIN

In Canada these Indians are found under the control of five agencies after 1894, and are divided into fifteen bands. As far as possible, the bands were tabulated separately, but are given by agency totals in the table (Table 9). The Assiniboin of the United States occupy two reserves in Montana. Formerly (1830-1880) the main division of the Assiniboin occupied a little explored country along the United States boundary line, and though regularly visiting posts both in the United States and Canada were not under close official observation, so we find less satisfactory data on their population. Even the early reservation rolls indicate some shifting from one reserve to another, especially under the same agency. In spite of these shifts, and frequent mixed marriages with Cree and Ojibwa which complicate the data, the agency totals give a fair picture of their population history.

In Table 9 we note that the numbers for United States and Canada are comparable after 1880. In both countries the numbers decline and then increase; those in the United States

increasing steadily since 1909, those in Canada at a slower rate since 1904. Since about the same number of Assiniboin live under each government, this regularity in population change suggests a uniform reaction to the reservation system. Our original tables segregate the individual bands in Canada and without exception, these show the same trends as are observable in the table of totals.

THE RESERVATION CREE

Between 1875 and 1883 the Canadian Reports for this area enumerate the Cree according to their registration under the treaties granting them annuities. We do not publish the

TABLE 10. THE RESERVATION CREE POPULATION

	Onion Lake	Carl- ton	Battle- ford	Duck Lake	Touch- wood	Qu'Ap- pelle	Ed- mon- ton	Crook- ed Lake	Hob- bema	Saddle Lake	Total
1884	1120	880	1594	815	1039	1584	352	1116	614	918	10,032
1889	693	1158	1209	662	856	950	71	1104	490	617	7,810
1894	489	1329	767	647	839	814	79	574	606	622	6,766
1899	526	1443	739	610	863	673	85	587	617	664	6,807
1904	624	1479	692	633	842	607	93	558	645	667	6,840
1909	873	1535	823	951	647	716	92	552	770	700	7,659
1914	807	1639	827	974	700	820	117	585	776	759	8,004
1917*	781	1508	861	1003	733	744	121	613	798	824	7,986
1924	730	1621	962	1049	777	813	110	647	852	760	8,321
1929	763	1766	1084	1126	833	881	86	713	935	829	9,016

* Data for 1918-1919 not available.

tables compiled, because while they show an annual increase, this is chiefly due to the addition of new names. However, these tables do show that stabilization was reached about 1883. Then came the so-called half breed rebellion of 1884-1885, during which some bands fled from their reservations, not to report for a time for annuities and registration.

We turn now to the table for population by agencies (Table 10). The full tabulations cover ten agencies and forty-eight bands. If graphs for each agency are plotted, it will be observed that all follow one type of curve, except Carlton: they fall quickly to a low level about 1894, remain flat until about 1904, then rise rather steadily to the present. On the average, these agencies now support about the same population as in 1884: Carlton is the exception, beginning with a low number, rising rapidly for the first few years, then gaining at about the same rate as the other agencies. If these numbers are taken at face value, this agency doubled its population since 1884, but it appears that the early gains were in part due to additions from without. After 1904, the increase of population is not much greater than elsewhere. Hence we assume that the true curve for Carlton would follow the form common to the other agencies. In other words, all ten agencies present regularity in population change. This curve, however, is not quite the same as for the Blackfoot and Assini-

TABLE 11. THE PLAINS TRIBES IN THE UNITED STATES

	Mooney		Lewis and Clark		Morse		Gallatin											
	1780	1804	1821	1836	1855*	1865	1875	1885	1895	1905	1915	1925	1932					
Arapaho	3,000	5,000	10,000	—	3,000	2,531	2,800	2,755	1,840	1,774	1,406	1,754	1,006					
Ankara	3,000	2,000	3,500	3,000	800	1,262	1,096	578	426	380	444	426	480					
Cheyenne	3,500	3,100	3,250	2,000	2,800	2,000	3,452	3,506	3,418	3,351	3,055	3,248	3,299					
Comanche	7,000	—	3,075	—	1,500	1,800	1,700	1,476	1,553	1,430	1,568	1,607	1,070					
Crow	4,000	3,500	3,750	3,000	3,360	3,657	3,420	3,200	2,287	1,787	1,700	1,777	1,088					
Dakota	25,000	8,410	13,650	43,000	30,000	24,228	29,797	23,875	26,318	28,060	29,381	31,544	35,328					
Gros Ventre	3,000	2,500	2,000	3,000	2,500	2,014	1,100	906	574	553	570	583	670					
Hidatsa	2,500	2,700	3,250	3,000	2,500	400	528	444	469	468	574	547	681					
Iowa	1,200	800	1,000	1,200	750	280	221	231	280	339	313	346	575					
Kansas	3,000	1,300	1,850	3,000	1,375	700	535	238	211	209	355	420	485					
Kiowa	2,000	1,200	4,000	3,000	2,800	1,800	1,700	1,152	1,126	1,220	1,548	1,031	1,077					
Mandan	3,600	1,250	1,250	1,500	385	400	420	355	253	263	268	273	297					
Omaha	2,800	600	600	1,000	800	950	1,001	1,156	1,202	1,246	1,331	1,480	1,576					
Osage	6,200	6,300	6,300	—	3,750	3,000	2,823	1,762	1,761	1,073	2,105	2,900	3,334					
Oto and Missouri	1,900	800	800	—	600	470	447	256	360	300	402	581	670					
Pawnee	10,000	4,000	4,000	—	4,000	3,416	2,248	1,055	706	644	603	723	853					
Ponca	800	200	200	1,000	700	970	738	1,055	608	845	875	1,081	1,184					
Ute	4,500	—	—	—	4,450	4,000	4,000	3,647	2,718	2,207	2,244	2,368	2,895					
Wichita (etc.)	3,200	—	—	—	925	950	1,083	1,034	1,020	1,045	1,000	1,201	1,327					

* Data for 1855-1932 from United States Indian Reports.

boin, since it shows less reaction to reservation life in lighter losses and more rapid recoveries.

THE RESERVATION OJIBWA

The Ojibwa in the United States cannot be properly classified as Plains Indians, but certain bands in Canada may. Unfortunately the earlier reports do not list the Ojibwa separately, but include them under certain treaties as "Ojibway and Cree." When reservations were allotted, the Ojibwa were segregated wherever possible, and accordingly we find on the Canadian official list nine bands which seem to have Plains characteristics. We have omitted the table for these bands because the population changes are closely similar to those so far presented. It is possible that the decrease in population before 1894 is less marked among these bands, but after that date, they tend to increase at the usual rate. Also the tendency of the Ojibwa to intermarry with the Cree and to a less degree with the Assiniboin, makes it difficult to tell which tribal ancestry dominates.

THE PLAINS INDIANS IN THE UNITED STATES

For comparison, we have tabulated populations for the Indians of the United States Plains, upon which detailed comment is unnecessary (Table 11). These are the data found in the published reports of the United States Indian Department and earlier historical records. It will be noted that in general the population trends for the reservation period are similar in form to those for Canada. The outstanding exception may be the Dakota, and if this be disregarded, the form of graph will be even more similar.

TABLE 12. POPULATION GROWTH IN A DAKOTA INDIAN COMMUNITY: CONTROL GROUP

	Males	Females	Total
1909	383	361	744
1914	417	418	835
1919	437	423	860
1924	471	429	900
1929	483	453	936

It should be noted, of course, that our study has been limited to Plains tribes whose reservation life is coincident with the disappearance of the buffalo and the consequent necessity for a radical change from a hunting to an agriculture economy. This readjustment in economic life was revolutionary, and is usually assumed to be the cause for population decline.

United States Reservation records have been criticized as inaccurate in that they indicate an unreal population growth. As a possible check we have used an independent marriage, birth, and death register for a Dakota Indian community, a copy of which was secured by Dr. Scudder Mekeel. The trend is shown in Table 12.

SUMMARY OF RESERVATION DATA

The direction of population change since the establishment of reservations in the area under consideration seems to have been uniform. Taking the statistics at their face values, decline was marked from 1880 to 1900. The greatest losses were before 1894. Several groups continued to decline, but at much slower rates, until about 1920. With the possible exception of the Sarsi, all are now increasing, one having doubled in thirty-five years.

By using data from both Canada and the United States we can compare population growth under the two national reservation systems. The aboriginal economic patterns in these tribal cultures were closely similar. It is possible that the two national reservation policies were equally uniform. However this may be, the population data show uniform trends. It has been assumed that the early losses were caused by the hard conditions imposed upon the reservation Indians.

On the other hand, the validity of the data has been challenged. The contrary interpretation would be that there were no real losses in populations; that the earlier records merely overestimated the true numbers. The same critics further question the later evidence on the assumption that the agency rolls carry the names of dead men. As to the latter, the method of auditing used by the Canadians should reduce this to a negligible minimum. Anyway the data for the two countries show the same trends. As to the sharp decline in early reservation days the argument runs thus. Critics of Mooney hold that his figures are too high; since he used data from sources similar to those furnishing our fur trade period lists, these also would be too high. Further, the early reservation estimates will continue to be too high until accurate registration corrects them. Thus the changes in population can be said not to be real. We suppose this would mean that no important changes have occurred and that Indian populations are stationary.

Such checks as we could devise seem to offset these objections. The Dakota control group (Table 12) shows that an Indian population can increase at a rate comparable to the progressive changes observed in our tables. In a future paper we shall present data on births and deaths which promise to be consistent with reservation data. Our conclusion is that both decline and later increase in reservation populations are real, though possibly exaggerated by errors in the record. We call attention once more to the impressive uniformity in the separate annual tables for the ninety-six groups, the constituents of the summary tables used in this publication.

SIZES OF CAMPS

It may be of interest to determine the approximate sizes of units in which these Indians operated. The Gros Ventre in 1754 were observed by Hendry in a large camp of 322 tents. We get the impression that this was the total for the tribe, but when Hendry first saw the camp it contained 200 tents. Next year when Hendry returned, he found these Indians in four camps of 100, 120, 30, and 70 tents, respectively. The Blackfoot in 1809 comprised two camps and later the Piegan maintained two divisions; the Blood are spoken of as if in a single camp. In general, it is clear that in 1809 the Blackfoot, Blood, Piegan, and Gros Ventre

were closely organized tribes, and though each might be found in two or three camps, these divisions were temporary. The same condition held for the Sarsi.

Henry (1809) gives us a list of eleven Assiniboin divisions, the sizes of which ranged from 24 to 200 tents in a total of 850. However, it is not indicated whether these divisions usually occupied single camps. In 1859 Palliser listed the following Canadian camps, which seem to have been contemporary, though there may be some duplication. The number of camps is as follows: Blackfoot, 3; Blood, 3; Piegan, 3; Sarsi, 3; Assiniboin, 11; Cree, 17.

About 1870 all the tribes residing in Canada were required to select reservations and we note certain differences in grouping. For example, the Sarsi, Blackfoot, Blood, and Canadian Piegan chose single reservations, whereas the Assiniboin were located on 15 separate reserves. We infer, therefore, that the Canadian Assiniboin at the time of choosing reservations were composed of at least 15 divisions, operating more or less independently. At the same time the Western Cree settled on some 48 reserves. It may be interesting to note the populations of these reserves for 1885: the Cree ranged from 50-400, though 24 reserves ranged from 75 to 150. Thus it appears that 100 persons was the approximate size of a band. The 15 Assiniboin bands are a little less regular, ranging from 50-300, approximately one-half falling between 75-150.

If this can be taken as an indication of the tendency before reservation days, it would be fair to say that the Assiniboin and Cree tended to operate in political divisions of approximately 100 persons each. It will be noted that the various bands chose reservations in clusters, thus resulting in a much smaller number of agency groups. Presumably, these groups represented certain camping tendencies, suggesting that the Assiniboin were accustomed to camp in 4-6 groups, and the Cree in 8-12 groups.

The larger closely organized tribes were divided into units usually designated as bands. Such units were common among the Plains Indians in both the United States and Canada. About 1903 the literature lists these bands as follows: Blackfoot, 6; Piegan, 23; Blood, 7; Sarsi, 2; Gros Ventre, 8.

Whether there were more or fewer of these bands in 1809 cannot be determined, but it is to be expected that many band names would survive even in the face of population decline. So, while we cannot be sure of the average size of such bands in 1809, upon the basis of the 1903 population, their sizes range from 70-170. Hence it seems probable that the average size of such band units among the larger well-organized tribes was approximately 100 persons. Perhaps this is the approximate number that could properly function socially and economically as a population unit in a culture of this type. Recalling that in 1809 the tendency was to maintain camps of 100-200 tents or 1,000-2,000 persons, such a camp would be composed of 10 to 20 such band units. It is probable that a camp of 20 such units was about the size limit for subsistence in this area.

GENERAL CONCLUSIONS

While the object of this paper was to bring together in convenient form the available data on tribal populations in the northern Plains area, some general conclusions are suggested.

1. The outcome of the larger study of which this is a part reveals successive expansions of groups into the northern Plains largely by Algonkin-speaking tribes: Blackfoot, Arapaho, Gros Ventre, Cheyenne, Ojibwa, and Cree. Thus, the repeated expansions into this area seem to have had a common source. The uniformity of this westward movement of Cree-like Algonkin is broken only by the Siouan-speaking Assiniboin. The historical data suggest that the Blackfoot first expanded into the area, followed by the Arapaho-Gros Ventre. The Cheyenne thrust was towards the southwest and to the Missouri. Later, the Ojibwa followed on their heels. The Gros Ventre held most of the Saskatchewan area in 1754, but shortly thereafter began to contract their range and to decrease in population. At the same time, the Assiniboin were expanding westward into the same area, reaching their maximum population about 1830. Following them, the Cree expanded westward, first along the North Saskatchewan, but gradually took to the plains in which their great expansion began after 1800 and culminated about 1875. It is generally believed that the Dakota in the United States made a similar expansion westward about 1800. In general, this study of population data suggests that these expansions in power and territory were accompanied by expansions in population, and that when the declines came, population shrank.

2. These expansions from the Lake country were not all in historic time and so were not entirely due to white pressure. However, the coming of the horse before direct contact with the fur trade could have stimulated expansion and population growth. Immediately following the horse came firearms and the fur trade, a period of economic prosperity, which should have further stimulated expansion.

3. Diminishing returns in buffalo and fur began about 1850, but the correlation with population changes is uncertain. We can be sure that the final disappearance of the buffalo and the taking up of reservation life was a severe blow both to culture and numbers. The crisis was more disastrous than smallpox, because the tribal culture collapsed. Nevertheless, recovery not only set in at an early date, but a few tribes in the larger Plains area seem to have suffered only small population losses.

4. The reservation system may be considered a stabilizer. It saved many tribes from destruction and though conceived as a quick method of absorbing the Indians, has resulted otherwise. In the days when the country went to the strongest, the weakened tribe ran great hazards. Indian traditions show that many tribes were wiped out, whereas in historic time few have vanished. At present our national Indian policy is to conserve tribal culture rather than to destroy it.

5. Within the area of intensive study we observe that each successive dominating period achieved about the same maximum number (Table 7): we infer that for the particular type of economic and political organization, this maximum represents the saturation point. After white contact, one conspicuous menace to man power was smallpox, but the evidence of rapid recovery in numbers, indicates that this alone did not keep numbers down. Yet the speed of recovering such losses seems to have been checked when the optimum was reached.

6. Both ethnographical and population data indicate that the Gros Ventre reached the

peak of power about 1780, the Assiniboin about 1835, the Western Cree about 1870. Thus the political-economic cycle was about 80-100 years. The history of smallpox for the area is not well known, but 1780, 1838, and 1856 are cited as foci for great epidemics. The extinction of the buffalo around 1880 should have effectively checked Cree expansion. It is possible, therefore, that smallpox broke the power of the Gros Ventre in 1780, giving the Assiniboin a chance to dominate and that when the latter fell victims to the disease in 1838, the Cree profited thereby, reaching their peak in numbers about 1860.

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REGIONAL DIVERSITY IN THE ELABORATION OF SORCERY IN POLYNESIA

REGIONAL DIVISIONS

SORCERY was practiced throughout Polynesia. Apart from obvious traumatic causes such as homicide and fatal accidents, deaths were usually regarded as due to the attacks of malicious spirits which punished infringements of taboo or had been directed against victims by sorcerers. Even deaths in battle or by accident were often attributed to one of the above causes. Though the full technique of the sorcerer has probably disappeared entirely in the Polynesian area, deaths are sometimes attributed by relatives of the deceased to sorcery exercised by some evilly disposed person with whom the art still lingers.

Throughout Polynesia, sorcery was practiced by persons of either sex, who were taught the technique by some established practitioner. In New Zealand and Marquesas,¹ the price of initiation was a fearful one in that the final test was the slaying of a near relative by means of the acquired art. Thus the graduate student might slay his own father or grandfather and might even try conclusions with his teacher. If successful, the mana (power) of his ritual was firmly established and he was dreaded by all. It can be readily understood that such a price for graduation incited the graduate to kill others as payment for the death of a blood kinsman. At the commencement of his professional career, the sorcerer divorced himself from ordinary human feeling. He had a grudge against society but he raised his self esteem through the fear and awe he created by the exercise of his power.

Sorcery was condemned by the general public but individuals resorted to sorcerers to gratify hates and jealousies that could not be settled by more open means. Envy against persons of eminence in other families and the desire to supplant ruling chiefs led to the employment of the sorcerer. The sorcerer was ready to comply and he demanded his price.

For the present study I have divided Polynesia into five regions and selected an island group to represent each region: western, Tonga; southern, New Zealand; central, Tahiti; eastern, Marquesas; northern, Hawaii. The proper representative of the eastern region is Easter Island but lacking details I have substituted Marquesas. The main elements of the sorcery technique is similar in the southern, central, eastern, and northern regions and differs in principle from the technique of Tonga. I have therefore termed the Tongan system as western technique and included the other four regions under the term of eastern technique.

Western technique. In Tonga,² sorcery was termed fakalouakau (louakau, a leaf) from the use of leaves to encompass death. Various kinds of leaves were wrapped up in bark cloth to form a ball. The ball was concealed or buried under the victim's house and as the leaves

¹ E. S. C. Handy. *The Native Culture in the Marquesas* (Bulletin, Bernice P. Bishop Museum, 9, Honolulu, 1923), 273.

² E. W. Gifford. *Tongan Society* (Bulletin, Bernice P. Bishop Museum, 61, Honolulu, 1929), 339.

rotted so the victim sickened and died. By burying the ball in a plantation, the crop could be caused to fail. A variation consisted of placing powdered leaves in a bamboo tube and burying it under the victim's door or bed.

The method appears to depend on magic alone, and death followed the decay of the leaves. No object that had touched the victim was required and evidently spirits were not invoked to bring about death.

Eastern technique. The eastern technique applies to New Zealand, Tahiti, Marquesas, and Hawaii. The main elements of the eastern method consisted of obtaining some material object that had been in contact with the proposed victim, subjecting it to a magical process, and afflicting the victim with malicious spirits which entered his body and caused the various symptoms of acute pain, fever, and delirium which preceded death. These elements are fundamental to the four regions mentioned but the elaboration of details varies. It is with these diverse elaborations that this paper is primarily concerned.

Native terms. It is to be noted that though the fundamental technique in the four regions is identical, the term for sorcery differs in each region. New Zealand uses the two terms *makutu* and *whaiwhaia*; Tahiti,³ *pifao* (hook piercing) and *tahutahu* (burning); Marquesas,⁴ *nati kaha* (sennit binding); and Hawaii,⁵ *anaana*. The term for sorcerer was formed in New Zealand, Marquesas, and Hawaii by placing the dialectical term for priest before the term for sorcery, thus forming *tohunga makutu*, *tuhuna nati kaha*, and *kahuna anaana* respectively. The priestly term is used in the meaning of the expert. Tahiti used special terms such as *feia tahutahu* or *orou* (kindlers) and *nanati 'aha* (sennit binders). The sennit binding term for sorcerer in Tahiti is the same as the Marquesas term for sorcery.

OFFENSIVE TECHNIQUES

The bait object and use. The term for the material object that had been in contact with the victim also differs. In New Zealand, it was termed the *ohonga* (the thing startled); in Tahiti, *tupu* (growth, shoot); in Marquesas, *mounu* (bait); and in Hawaii, *maunu* (bait). Marquesas and Hawaii evidently agree that the object is the bait by which the victim's vital essence may be secured and extinguished. New Zealand regards the *ohonga* as being impregnated with the victim's *hau* (breath, life principle), and Tahiti⁶ similarly regards the *tupu* as containing the *iho* (essence) of the victim. The term bait will be used to distinguish this object throughout this article.

The material objects serving as bait are practically identical throughout the four regions. They consist of parts of the body (hair cuttings, nail parings), secretions and excretions (saliva, urine, excreta), food leavings, water left in vessel after drinking, clothing, sleeping mats, and in New Zealand, the earth or sand from footprints.

The bait is secured secretly and taken to the sorcerer. In New Zealand, the sorcerer

³ T. Henry. *Ancient Tahiti* (Bulletin, Bernice P. Bishop Museum, 48, Honolulu, 1928), 203.

⁴ Handy, *op. cit.*, 272.

⁵ D. Malo. *Hawaiian Antiquities* (Honolulu, 1898), 135.

⁶ Henry, *op. cit.*, 204.

wrapped it in a leaf while reciting a formula and placed it in a hole dug in the ground for the recital of the final incantation. Marquesas⁷ also used a leaf wrapping and buried the bait in the ground. Outside of New Zealand, elaboration took place in the use of receptacles other than the simple hole in the ground. This was simplest in Hawaii where a wooden bowl, in no wise different from other bowls in common use, was made the receptacle for the bait. Marquesas used a special bag made of sennit and other fibre as well as the leaf wrapping. Tahiti showed the most elaboration with a specialized stone bowl (*ofa'i-i-raro*) fitted with a stone cover (*ofa'i-i-ni'a*) and kept in a special building. Large bait objects such as sleeping mats and clothing were folded and placed in a coconut leaf basket with a close fitting cover. The receptacle, whether stone bowl or basket, was generically termed *fari'i tupu*.

Both New Zealand and Marquesas resemble Tonga in burying a leaf object; but though leaves were used in the three regions, the New Zealand and Marquesas leaf wrappings contained a bait impregnated with the vital essence of the victim, whereas in Tonga, the leaves contained no such vital core. In Tahiti and Hawaii, elaboration in the use of receptacles unsuitable for burial mark a departure from the simpler pattern of covering up the bait in the earth, but the covers of the stone bowl and basket in Tahiti may have originated from a similar idea of sealing up the bait.

The demonic agents. The non-human agents which completed the death process at the request of the sorcerer require consideration. The gods of New Zealand have been divided into four classes by Elsdon Best.⁸ The fourth class, termed *atua maori*, were not worthy of the name of gods. If we accept the distinctions made by the Folk Lore Society⁹ of Great Britain that the *soul* is the separable personality of a living person, the *spirit* a soul-like being which has never been associated with a human body, and the *ghost* the soul after the death of its physical body, we must regard the fourth class of gods as being mainly recruited from ghosts. The *atua kahu* were ghosts derived from abortions and miscarriages and they were invariably malignant. The sorcerer entering practice had to provide himself with a demonic agent by making petitions and offerings (*whangaia*) to the ghost of a selected defunct relative. Ghosts were evidently fairly easy to enlist so long as the petitions and offerings were kept up but they were also revengeful if neglected after the alliance was made. Having secured a ghost, the sorcerer became its medium and the ghost became his familiar. The familiar obeyed the commands of the sorcerer to take demonic possession of a victim whose bait had been subjected to the magical treatment. The familiar was newly created and served one person, whereas gods of the third and superior classes were worshipped by groups through the medium of a recognized priest. Only one familiar was considered necessary by each sorcerer, but I have no definite knowledge whether or not images or material objects were provided by the sorcerer as an abiding place for his familiar.

⁷ Handy, *op. cit.*, 273.

⁸ Elsdon Best, *The Maori* (Wellington, 1924), 1: 234.

⁹ *Apud* Best, 300.

In Hawaii,¹⁰ the sorcerers worshipped the gods Ku-koae, Uli, and Ka-alae-nui-a-Hina, but demonic agents to complete death were recruited by the same method as in New Zealand. The ghosts of deified ancestors, whose worship and service were handed on from father to son, were termed aumakua¹¹ and they corresponded to the third class of gods in New Zealand. The Hawaiian sorcerer,¹² however, created a familiar by persistent prayers and offerings to an unattached ghost. He became the kahu (keeper) of the newly created familiar and the familiar, who obeyed his keeper in doing errands of vengeance or murder was termed an unuhi-pili and not an aumakua. The familiar became resident in some object, such as an image or a bundle of bones. The sorcerer might create more than one unuhi-pili so that if one felt indisposed, he could send out another. If the sorcerer ceased to render offerings to his familiar, it not only refused to work for him but wreaked vengeance on the keeper for his neglect.

In Marquesas, Handy¹³ doubts the use of evil spirits to effect symptoms and states, "Sickness and death resulting from the practice of sorcery (*nani kaha*) seem to have been conceived of as resulting directly in a magical way, rather than through the medium of evil spirits." I am inclined to think that such a conception among the people has been due to missionary influence which has made them conveniently forget the things frowned upon by the church. This is supported by Handy's statement¹⁴ further on, that the sorcerer had a familiar spirit derived from the deceased relative who was the initiate's first victim to prove the mana of the newly acquired technique in sorcery. Why should a sorcerer acquire a familiar spirit on graduation unless it was to assist him in his professional practice?

In Tahiti, the demonic agents recruited from ghosts underwent elaboration not only in number and in function but also in material form as carved images.

Elaboration in Tahiti. In Tahiti, the ghosts of defunct persons who missed entrance to the Paradise of Rohutu-noanoa, sojourned in a less desirable region ruled by Ta'aroa-nui-tuhi-mate. After a year or so, they were allowed by Ta'aroa to revisit the upper world. These ghosts were termed 'oromatua, and Henry¹⁵ divides them into three classes; two were kind, but the third was malignant. The malignant class was termed 'oromatua-'ai-arua (devouring ghosts of darkness) or 'oromatua-niho-roa (ghosts with long teeth). They were also termed varua-'ino (evil spirits). It was from this class of ghosts that the sorcerers obtained familiars to assist them in their practice.

Small images in human form, with flexed thighs and arms clasped over the front of the body, were made from wood, stone and coral, by professional carvers. The sorcerer obtained a number of these images and invoked the malignant ghosts to enter them. The inanimate images thus acquired a spiritual charge and each image was given an individual name. The

¹⁰ Malo, *op. cit.*, 113.

¹¹ *Idem*, 157.

¹² *Idem*, 116, 158.

¹³ Handy, *op. cit.*, 263.

¹⁴ *Idem*, 273.

¹⁵ Henry, *op. cit.*, 201-204.

sorcerer had thus recruited a family and he regarded himself as father (metua) of this evil brood. The elaboration of a number of material objects created the need for special accommodation. The images were termed ti'i and an image house (fare ti'i), set on high pillars, was built for them within one of the lesser religious enclosures (marae). The images were systematically arranged on shelves and the sorcerer slept below on the floor. The stone bowl for receiving the bait was kept in the image house. A shell (vava) was kept with the images and the murmuring sounds heard on raising it to the ear were supposed to be messages to the father from his unique family.

Further elaboration became necessary owing to the images being credited with human desires. Besides being housed, they had to be fed, clothed, and tended. The sorcerer cooked food for his family on a taboo fire because the material form of the food had to be offered to them in order that they might absorb the spiritual essence. The images were also bathed, dried in the sun, anointed with oil, and dressed in the best cloth. They were allowed to take part in the great religious ceremony of pa'i-atua in which all the gods of the district were exhibited in the most important marae of the district. Here they received a charge of sanctity by receiving sacred feathers which had been in contact with the national god of the highest status. The sorcerers were allowed to be present at the procession of priests and they carried their images exposed on a board. Though the images were allocated the outside position of least importance, the sorcerers with their images were allowed to pay homage to the principal god and to exchange amulets at the sacred shrine. The images also received an offering of kava (*Piper methysticum*). The images were supposed to meet other evil spirits at this meeting of all the gods but it was the only occasion on which they were allowed on the royal marae.

If the sorcerer neglected his family, they tumbled him out of the image house during his sleep. As there was no alcohol in Tahiti at that time, we may fairly assume that the sorcerer told the tale of imaginary ejectments to add to the prestige of his family and incidentally of himself by indicating the power that lay behind him. The sorcerer provided accommodation not only for his images but also for himself, and by securing a site within the religious enclosures he raised his status and received public recognition as an institution, whereas his fellow practitioners in New Zealand, Marquesas, and Hawaii were regarded as an excrescence on society. The images also rose in the social scale beyond the status of their immaterial brethren in the other three regions.

The more elaborated set-up in Tahiti also led to more detail in the killing process. When the bait had been placed in the appropriate receptacle, the images by name were invoked by the sorcerer to assume their spirit form or rather to let loose their spiritual charge and attack the person whose essence (iho) was contained in the bait before them. They did so and those images which went as persons (ti'i-haere-ta'ata) could be seen and heard approaching and entering the victim. Others that assumed an earthworm technique (ti'i-motoe) worked up through the ground into their victim. The material of which the images were made exercised an influence on the form of the symptoms; the stone imp weighed down

heavily, the coral imp lacerated the internal viscera, and the wooden imps pushed and pierced their way through the intestines. From vigorous onslaughts, the victim died within a few hours (*nati poto*), but in other attacks death took longer to procure. In New Zealand, Marquesas, and Hawaii where systematization did not go so far as in Tahiti, it was sufficient for the sorcerer to launch his familiar spirits by the appropriate formulæ and the end results were similar in the four regions. In regions where the familiars were not represented in material form, the diagnosis of different sets of symptoms was not considered. In Tahiti, the demonic agents were multiple, whereas in the other three regions one agent was evidently considered to be sufficient. In Hawaii, however, reserves were kept in case of failure, but the whole battery was not discharged at once as in Tahiti.

A further development took place in Tahiti in the appearance of social grades among sorcerers. It would appear as if the public recognition of sorcerers led the legitimate profession of priests to include sorcery within their practice. They added sets of images (*ti'i*) to the gods they served and the most numerous were those of the great national god, Oro. The images were termed the canoe of images of the god (*va'a ti'i a te atua*). These were housed in image houses (*fare ti'i*) of more pretentious form, and one seen by Ellis¹⁶ in Huahine stood on strong posts which elevated the floor twelve feet above the ground. The priests¹⁷ who indulged in sorcery built special houses (*fare tahutahu*) for themselves, and a sorcerer's house became an indispensable part of every important religious enclosure. All female sorcerers were excluded from the higher order and it is evident that entrance to the higher order could be only through the legitimate priesthood. The sorcerers (*tahutahu*) of the higher order were called upon to use their art to avenge the king and chiefs on their enemies, to slay offending sorcerers of an inferior order, to destroy a national foe, and to aid warriors by performing magic rites on slain or captured chiefs. The higher order obtained great influence over all grades of society and sometimes used their influence against the chiefs and even against the king. On the other hand they were sometimes slain by a warrior at the command of a high chief.

The use of images by the sorcerers was not due to independent evolution but was borrowed from the established technique of religion. Professional carvers made images which from their human form were termed *ti'i*. The priest charged these inanimate images with the spiritual potentiality of their gods, and the objects were then termed *to'o*. The sorcerers copied the priests by obtaining images from the carvers and charged them with the disembodied ghosts known as *oromatua*. These ghosts were not of the same status as the gods and the charged images remained as *ti'i*. Though the *ti'i* and the *to'o* might resemble one another in material appearance, there was a great difference in the quality of the spiritual charge and in function. The copying method adopted by the sorcerers carried their image houses within the precincts of the lesser religious enclosures. The sorcerer in Tahiti reached the threshold of religion but the qualified priesthood prevented him from gaining

¹⁶ W. Ellis. *Polynesian Researches* (London, 1830), 2: 202.

¹⁷ Henry, *op. cit.*, 206.

access to the inner sanctum. It is true that the sorcerer and his *ti'i* images received religious recognition during the *pa'i atua* ceremony, but they got no further. The sorcerer's advance to religious status was checked by the priesthood instituting a higher order of sorcerers from within their own ranks. The higher order, however, borrowed the technique of the lower order by creating *ti'i* representatives of their higher gods for the purposes of the special department of sorcery. Thus the *to'o* representative of the god was used in religious ritual, but the *ti'i* representatives of the same god were used in sorcery.

In the development of material forms for the exercise of sorcery as exemplified by bait receptacles, images, image houses, and sorcerer's houses and in social and religious recognition, Tahiti shows the highest peaks of advancement in these particular directions. In New Zealand, the sorcerer was recognized and feared but he was condemned by the higher priesthood and did not receive religious recognition. In Marquesas and Hawaii, the sorcerers occupied the inferior status of their New Zealand brethren.

DEFENSIVE TECHNIQUES

Treatment. In Tonga,¹⁸ the victim after being attacked by the symptoms of sorcery, could be cured only by the sorcerer who had caused the attack. Relatives begged and paid the sorcerer to spare his victim. The healing technique consisted of exposing the bamboo tube to the sun or changing the contents. If a mistake were made in the changing of the leaves, the sorcerer died as well as the patient.

In the other Polynesian regions, the practice was to employ another sorcerer to diagnose the case. In Marquesas,¹⁹ the sorcerer causing the trouble was paid to remove his spell. This form of treatment resembles that of Tonga. In New Zealand, such treatment was not available in general practice owing to the opinion that once the sorcerer had hurled his "spoken spear" (*tao ki*), it had to kill. If it failed to kill the victim, it returned to the sorcerer and killed him. At a public meeting among a tribe other than my own, a young chief boasted that European medical knowledge was powerless against certain Maori ailments and that if he used a certain formula against me, no European treatment could cure me. Whilst admitting the inefficacy of the British pharmacopeia in such cases, I had sufficient confidence in my immunity to challenge him to throw his spear and so commit suicide. It was a case of bluff between two young men, but my unexpected knowledge of sorcery technique almost resulted in serious consequences to my opponent who went about for some time in fear that I might assume the offensive. With the fear of self-immolation, the Marquesas treatment could not be accepted by the profession in New Zealand. The orthodox treatment was to engage a sorcerer of greater power to turn the attack by the exercise of a ritual of greater potency. If the patient recovered, the offending sorcerer, of course, died.

In Tahiti,²⁰ matters were more systematized by including a healing god in the pan-

¹⁸ Gifford, *op. cit.*, 340.

¹⁹ Handy, *op. cit.*, 277.

²⁰ Henry, *op. cit.*, 209.

theon. This was Ro'o-te-ro-ro'o, who was of high status. He had religious enclosures and priests. The priests received the special designations of apa, ha'atupu (to cause to grow), and tao-ti'i (image spear). The relatives of a patient suffering through sorcery had recourse to a priest of Ro'o-te-ro-ro'o and the healing treatment was conducted in the religious enclosure of that god. The petitioners presented gifts to the god in the person of his priest. The priest took a banana shoot in one hand to represent the sorcerer and some kava root for his own god in the other. The patient, or his relatives for him, confessed to any sins that might have provided a cause for his affliction. The priest by a healing prayer transferred the evil to the banana shoot and incidentally to the sorcerer whom it represented. He asked forgiveness for the sins confessed and conjured the patient to throw off the evil spirits as the required ritual had been complied with. The familiars from wooden images were fairly easy to eject but those from stone and coral were more obstinate. Some patients recovered and others died, which after all is what happens in any medical practice. If the priest obtained full control of the situation, the demonic agents obeyed him and even destroyed the sorcerer and his family. This resembles New Zealand practice but the sorcerer's family is an extra not included in the New Zealand mortality list. The religious trend seen in the development of the higher order of sorcerers is carried a step further in Tahiti by providing a special god who was inimical to sorcerers and evil spirits. The provision of a god necessitated the further provision of special priests and religious enclosures.

The complex developed around material images in Tahiti led to a further elaboration. When a sorcerer decided to retire from practice, he had to dispose of his family in a manner that would prevent their persisting in the original agreement. This need created the ritual of fa'aru'e-ti'i (abandoning the ti'i).²¹ The sorcerer dug a grave from three to four feet deep for each image and before covering them up, he bade each a courteous farewell, expressing his regret that he was retiring from business and thus had no further employment for them. If they managed to work out of their place of interment and annoyed him, he exhumed the material images and reburied them in another place. By this arrangement, the Tahitian sorcerer evidently showed some originality, for his brother practitioners in New Zealand and Hawaii suffered fatal consequences if they ceased to minister to their familiars. On the other hand, the desire to retire from practice may not have been felt by the New Zealand and Hawaiian sorcerers.

Revenge. Throughout Polynesia, it was a point of honor to avenge a relative's death. Any unexpected death was attributed to sorcery and various methods were adopted to confirm the diagnosis and locate the offending sorcerer. In New Zealand, Tahiti, and Hawaii, relatives or selected warriors might avenge the death by slaying the offender. Failing this sure and inexpensive method, a powerful sorcerer was engaged to eliminate his fellow practitioner. In Marquesas, revenge spells were employed by relatives who were evidently not necessarily practicing sorcerers.

In Tahiti,²² we have seen that the apa priest used a banana shoot to represent the

²¹ *Idem*, 208.

²² *Idem*, 209.

offending sorcerer and if he obtained full control, the sorcerer was killed by his own agents. I have no account of the ritual used to obtain revenge after the victim's death, but it is probable from the trend of the Tahitian technique that a banana shoot was also used to represent the sorcerer.

In Marquesas,²³ a revenge spell termed *naue* was employed by a female relative of the victim. She rubbed her body with red earth and ashes, put on a leaf apron, and decked her hair with the red flowers of the hibiscus. Taking some breadfruit paste and noni fruit, she approached the home of the murderer, throwing pieces of food about and repeating, "Here is food for your friend." The soul of the murderer and the ghost of the victim appeared. If the murderer was in front, the spell would have the desired result. Another rather ineffective form of *naue* consisted of female relatives weeping near the dead body, and anyone accepting anything from their hands would be taken as a victim. The most sensible technique consisted of carrying out the *utuna* rite on a sacred place where an offering of a pig, fish, or kava was made to a specific god with a formula invoking him to bring about the death of the sorcerer whose name was mentioned.

It may be interesting here to mention that the only detail recorded by Mrs. Routledge²⁴ concerning sorcery in Easter Island is connected with revenge. The victim of sorcery was termed *tangata ika* (fish man) and elaborate spells were used to kill the slayer. The corpse of the victim was placed on a religious stone platform (*ahu*) and turned over from time to time. An alternative procedure was to seat the corpse on a rock seat where it was held in position by one man while two others sat behind, chanting songs to assist the avengers. The watchers of the corpse smeared themselves with charcoal, wore feather hats, and carried dancing paddles (*rapa*). The man in charge was termed *timo*. If the avengers mentioned were armed warriors, the Easter Island method shows a very sensible combination of two techniques, magic and direct physical force. Here also the handling of the corpse shows an elaboration on the Marquesan technique.

In New Zealand,²⁵ the avenging sorcerer first made his diagnosis by questioning the corpse as to direction and then as to person by enumerating the names of suspects. A slight movement of the corpse indicated an assent to the question. The sorcerer then took some saliva from the mouth of the corpse, wrapped it in a leaf, and placed it in a small hole made in, or near, an image of heaped up earth on the ground. Holding a stone in his hand, he recited spells until a fly appeared and entered the hole. The officiating sorcerer dashed the stone down and slew the fly, which of course represented the soul of the offending sorcerer. The revenge technique does not differ greatly from the orthodox slaying technique, but a material difference is apparent in the use of saliva from the corpse instead of a bait which had touched the person being done to death.

Elaboration in Hawaii. In Hawaii,²⁶ the desire for revenge led to the institution of an

²³ Handy, *op. cit.*, 274, 275.

²⁴ Mrs. Scoresby Routledge. *The Mystery of Easter Island* (London, 1919), 229.

²⁵ Best, *op. cit.*, 333.

²⁶ Malo, *op. cit.*, 135-41.

Turning now to Table 8, the population trend from 1880 to the present is easily observed. At the outset all decline, but with the possible exception of the Sarsi eventually start upward. The general nature of this trend is apparent in the totals for the tribes living in the United States. For those in Canada, the decline continues almost to the present. The United States Piegan show a slight loss from 1874 to 1884, reaching their lowest about 1900, since which time they have gained steadily, approximately doubling in thirty-five years.

TABLE 9. THE RESERVATION ASSINIBOIN

	Morley	Indian Head	Battle- ford	Moose Mt.	Edmon- ton	Canada Total	Ft. Peck	Ft. Belknap	U. S. Total
1874	—	—	—	—	—	—	1998	2700	4698
1875	—	—	—	—	—	1215	—	—	5498
1879	—	—	—	—	—	—	1469	977	2446
1884*	621	251	249	210	614	1945	1195	1000	2195
1889	588	248	228	148	631	1843	705	830	1535
1894	647	210	154	121	631	1763	710	782	1492
1899	594	213	89	75	588	1559	660	716	1376
1904	641	210	73	196	601	1721	573	699	1272
1909	661	207	88	203	585	1744	610	643	1253
1914	659	204	84	213	563	1723	640‡	639	1279
1919†	670	200	93	213	597	1773	752	638	1390
1924	607	204	98	220	577	1706	809	597	1406
1929	611	217	109	248	628	1813	—	601§	—
1934	—	—	—	—	—	—	1406	647	2108

* After this date Canadian and United States Assiniboin are counted separately.

† All Canadian data are for the year 1917; United States data for 1918.

‡ For 1916.

§ For 1930.

THE RESERVATION ASSINIBOIN

In Canada these Indians are found under the control of five agencies after 1894, and are divided into fifteen bands. As far as possible, the bands were tabulated separately, but are given by agency totals in the table (Table 9). The Assiniboin of the United States occupy two reserves in Montana. Formerly (1830-1880) the main division of the Assiniboin occupied a little explored country along the United States boundary line, and though regularly visiting posts both in the United States and Canada were not under close official observation, so we find less satisfactory data on their population. Even the early reservation rolls indicate some shifting from one reserve to another, especially under the same agency. In spite of these shifts, and frequent mixed marriages with Cree and Ojibwa which complicate the data, the agency totals give a fair picture of their population history.

In Table 9 we note that the numbers for United States and Canada are comparable after 1880. In both countries the numbers decline and then increase; those in the United States

increasing steadily since 1909, those in Canada at a slower rate since 1904. Since about the same number of Assiniboin live under each government, this regularity in population change suggests a uniform reaction to the reservation system. Our original tables segregate the individual bands in Canada and without exception, these show the same trends as are observable in the table of totals.

THE RESERVATION CREE

Between 1875 and 1883 the Canadian Reports for this area enumerate the Cree according to their registration under the treaties granting them annuities. We do not publish the

TABLE 10. THE RESERVATION CREE POPULATION

	Onion Lake	Carl- ton	Battle- ford	Duck Lake	Touch- wood	Qu'Ap- pelle	Ed- mon- ton	Crook- ed Lake	Hob- bema	Saddle Lake	Total
1884	1120	880	1594	815	1039	1584	352	1116	614	918	10,032
1889	693	1158	1209	662	856	950	71	1104	490	617	7,810
1894	489	1329	767	647	839	814	79	574	606	622	6,766
1899	526	1443	739	610	863	673	85	587	617	664	6,807
1904	624	1479	692	633	842	607	93	558	645	667	6,840
1909	873	1535	823	951	647	716	92	552	770	700	7,659
1914	807	1639	827	974	700	820	117	585	776	759	8,004
1917*	781	1508	861	1003	733	744	121	613	798	824	7,986
1924	730	1621	962	1049	777	813	110	647	852	760	8,321
1929	763	1766	1084	1126	833	881	86	713	935	829	9,016

* Data for 1918-1919 not available.

tables compiled, because while they show an annual increase, this is chiefly due to the addition of new names. However, these tables do show that stabilization was reached about 1883. Then came the so-called half breed rebellion of 1884-1885, during which some bands fled from their reservations, not to report for a time for annuities and registration.

We turn now to the table for population by agencies (Table 10). The full tabulations cover ten agencies and forty-eight bands. If graphs for each agency are plotted, it will be observed that all follow one type of curve, except Carlton: they fall quickly to a low level about 1894, remain flat until about 1904, then rise rather steadily to the present. On the average, these agencies now support about the same population as in 1884: Carlton is the exception, beginning with a low number, rising rapidly for the first few years, then gaining at about the same rate as the other agencies. If these numbers are taken at face value, this agency doubled its population since 1884, but it appears that the early gains were in part due to additions from without. After 1904, the increase of population is not much greater than elsewhere. Hence we assume that the true curve for Carlton would follow the form common to the other agencies. In other words, all ten agencies present regularity in population change. This curve, however, is not quite the same as for the Blackfoot and Assini-

walked in single file along the water's edge. The rising tide effaced their footprints and thus prevented the local sorcerers from obtaining bait to practice on.

Elaboration in New Zealand. Beside personal care which contained the elements of personal hygiene, the chiefs used their personal taboo as a means of protection. Their hair was cut in a specific locality termed a purepurenga. Personal taboo was concentrated in the head and extended to the hair. The falling hair infected the purepurenga locality with the chief's taboo. The family spirits which protect a chief's taboo act in a manner very similar to the familiar spirits of a sorcerer. Anyone who interfered with the taboo place was attacked by the spiritual guardians of the chief's taboo. The taboo was thus ahead of sorcery in time and no person would dare to seek hair bait from a tabooed site. Similarly, a little rise or summit (taumata) in a village, whereon the chief was wont to bask in the sun, was also impregnated with the chiefly taboo and an earth bait from the imprints of the chiefly haunches would have acted as a figurative bomb if touched. A chief's taboo extended to his food, clothing, bedding, and private property, and though the function of taboo as a protection against theft has been stressed in literature, it can be seen that it was also a powerful protection against sorcery. Protection was ensured through the fear of the automatic action of taboo through its spiritual guardians. The concept of the automatic action of taboo replaced the need for special attendants to prevent the collection of bait objects. Such a method of protection, however, was confined to the privileged classes that were endowed with taboo through birth and position.

A further elaboration of the taboo mechanism as a preventive measure against sorcery had a wonderful result upon sanitation. New Zealand was the only region in Polynesia that had a system of public latrines connected with its villages. Cook²⁹ remarked that the native villages were in a better sanitary condition at the time of his visit than the towns of Europe. It is true that living conditions differed between New Zealand and tropical Polynesia. In Polynesia, the people had immovable property in the form of fruit-bearing trees such as the coconut, breadfruit, bananas, and plantains. They lived near their cultivations as much to protect their food supplies as for ease in transporting provisions. They did not usually congregate in villages until Christianity led them to assemble their dwellings. Under such conditions, they were able to dispose of their excreta in the neighbouring bush or at the lagoon edge where the rising tide acted as scavenger. In New Zealand, however, the people had none of the fruit-bearing trees of Polynesia, and for protection they congregated in fortified villages situated on hills or promontories jutting out into the sea. Each village had one or more public latrines located on the edge of a cliff or steep declivity to allow the excreta to fall clear. The latrine itself consisted of two short wooden uprights supporting a cross plank upon which the person squatted with his feet on the plank. One or two posts set firmly before the cross-plank furnished secure hand hold to prevent danger of accidents owing to the proximity to the cliff edge. I mention such details to show that a

²⁹ John Hawkesworth. *An Account of the Voyages . . . for Making Discoveries in the Southern Hemisphere* (3 vols. London, 1773), 2: 314.

sanitary complex had taken definite material form. As far as Polynesia is concerned, it was a definite local invention of no small importance.

Local conditions paved the way for this departure from the Polynesian pattern. The available forest cover and beaches were too far away to be utilized when needed. It may be argued that in a crowded village, a natural instinct to avoid filth was a sufficient stimulus to lead to the form of sanitation that was evolved. The experience of medical officers of health in crowded European and American cities does not support such a theory. The masses of white communities have continued to live under filthy conditions until sanitary reforms were forced upon them by some higher authority. It is not to be expected, therefore, that sanitary evolution took place in New Zealand through a natural antipathy to filth when such a reaction is denied among higher cultures. Some cultural attitude must have existed among the New Zealanders that was absent among their white contemporaries in Europe. I venture the suggestion that this different cultural attitude towards filth was the fear that excreta would be used as bait for the purposes of sorcery. I have heard the statement made by chiefs versed in native lore, that in ancient times the person whose excreta was not deposited in the proper place was slain by sorcery. The proper place was some site such as the cliff edge where excreta was removed from sight. Here the element of physical danger was removed by providing hand-posts while the cross plank was an accessory improvement. Had the complex halted here, we might doubt whether fear of sorcery was the causative factor in the evolution of the latrine. The theory, however, is supported by the fact that all latrines were assigned a taboo which prevented anyone from meddling with them. Cliffs were not always available in the natural defences of the village site and bait material could have been obtained from many of the latrines. The technique of prevention that had become established in the chief's hair-cutting and sunning places was applied to the latrines. This involved the appointment of special spiritual guardians to punish the person who attempted to use the latrines for antisocial purposes. Every latrine in addition to being taboo was protected by special guardians. Just as the chief's hair-cutting place was safe through its taboo and self-acting guardians, so the latrine was rendered safe to all the inhabitants of the village by the extension of a similar protective technique. Hence out of the fear of sorcery was evolved a sanitary system that was in advance of that of the cities of Europe.

Elaboration did not end with the provision for public sanitation. The latrine, or paepae as it was termed, was impregnated with a taboo that was a prophylactic against individual sorcery. Another form of sorcery existed, by which enemy sorcerers were credited with being able to depress the vitality of opposing warriors. In this form no bait was needed and whilst it did not kill directly, it rendered its victims an easy prey to their opponents in battle. To prevent such danger, the warriors setting out on a war expedition were arrayed before the village paepae where the priest recited a formula which protected them against magical attacks. The paepae having a specialized furniture, the ritual was further specialized by the warriors biting the cross-plank in order to become more closely associated with the

protective influence of the paepae against magic. Hence the special ritual was termed *ngau-paepae* (biting the cross-plank).

The absence of structural latrines in Polynesia has led me to postulate it as a local invention in New Zealand. Yet Maori myth states that the first paepae was built in the far off ages when Rupe ascended to the Tenth Heaven to visit the god Rehua. Rehua's people were so incorrigibly lazy and filthy that Rupe built them a paepae on the edge of a cliff and there laid down the pattern since followed. Traditional records state that when Turi of the Aotea canoe arrived in New Zealand in the middle of the fourteenth century, he built his village of Rangitawhi on the banks of the Patea River and amongst other things, he built the village latrines which he named *Paepae-hakehake*. As a medical officer of health, I used to stress these two important events in support of the reintroduction of the principles of sanitation which had been abandoned on the vacation of the hill forts in post-European times. I now consider that these incidents have been projected back in time and that the latrines were not evolved until some time after the Polynesian immigrants had begun to live in hill forts in New Zealand. After all, mythology and the older historical narratives were oral literature that functioned through use in speech and story, and additions do not destroy values but rather add to the interest of scientific analysis. The mythical origin of the latrine gave it the added value of antiquity and the post-dating indicates the value in which it was regarded as a social institution. With its taboo and specialized function, the paepae had become a religious altar.

Protection in Tahiti. In addition to the usual individual care, all persons of high rank provided themselves with hereditary attendants³⁰ whose duty it was to dispose of all material that could be used as bait. Such material was burned, buried, sunk in the sea, or deposited in the refuse pit (*tiri-a-pera*) of the religious enclosures where it was safe from interference. This technique shows that the chiefs of Tahiti did not rely upon their personal taboo to the same extent as did their Maori kinsmen. It is not recorded that any special utensils were used.

Elaboration in Hawaii. In Hawaii, the non-reliance on personal taboo was even greater than in Tahiti, for in addition to hereditary attendants, special utensils for secretions and excretions were evolved. The special utensils consisted of a wooden spittoon (*ipu ku'a*) and a wooden vessel for holding urine (*ipu mimi*), which on occasion was used for excreta (*ipu lepo*). These vessels differed in shape from the food bowls and were thus specialized in form as well as function. Utensils with such a specialized function occur nowhere else in Polynesia.

The hereditary attendants³¹ had special duties and specific terms were assigned to them. In this respect, there appears to be some advance on Tahiti. The titles of the special attendants to prevent the collection of bait objects were as follows: Keeper of the wardrobe

³⁰ Henry, *op. cit.*, 204.

³¹ M. W. Beckwith. *Kepelino's Traditions of Hawaii* (Bulletin, Bernice P. Bishop Museum, 95, Honolulu, 1932), 122.

(Malama-ukana), Spittoon bearer (Pa'a-ipu-kuha), Private attendant (Poe-o-Kahi-kapu).

The duties of the wardrobe keeper were naturally to keep an eye on all clothing and ornaments worn by the chief and to prevent their abstraction for the purposes of sorcery. He also disposed of worn clothing that went out of use. The spittoon bearer had to be in constant attendance to anticipate the chiefly desire to expectorate and any neglect on his part was visited with capital punishment. The personal attendant had to be within call and he personally attended to the disposal of urine and excreta. The secretions and excretions were disposed of secretly at night by burial or casting into the sea. The three attendants evidently attended to their own duties and did not exchange functions.

The high chiefs were also surrounded by taboo restrictions and armed guards prevented the approach of people who were not entitled to have audience. While the various taboos may be regarded as means of increasing social prestige and preventing assassination, such regulations also had some part in preventing the secret securing of objects suitable as bait. The departure from the automatic mechanism of taboo in New Zealand is further seen in the appointment of an official executioner (ilamuku) to slay by physical means those guilty of breaking taboos. The officialdom and red tape characteristic of higher cultures was well advanced in Hawaii.

SUMMARY AND CONCLUSIONS

Some of the main elements in the sorcery complex are listed on the following page for comparing the five regions described. The table may not be quite correct, as some of the elements dealt with may have been omitted in the literature.

The table shows what little there was in common between the western and eastern techniques. Both have elements that find affiliations elsewhere but this aspect is outside the scope of this paper.

Certain elaborations in eastern technique were stimulated by the bait and spirit agents, both of which were absent in western technique. Other elaborations were stimulated by the human instincts of self-preservation (treatment and prevention) and revenge. In western technique, curative treatment was monopolized by the offending sorcerer, while preventive measures could not well be devised against the use of leaves known only to the sorcerer. The western region seemed to submit to sorcery without taking action to obtain revenge. Hence both technique and inertia seem to have militated against cultural elaborations being stimulated in the western region by sorcery.

In the four selected regions which used the eastern technique, the more varied elements of the sorcery system stimulated elaborations in various directions in different regions. The diversity is shown by the grouping of the crosses in different parts of the table shown. Marquesas shows the least elaboration. New Zealand and Marquesas retained the leaf wrapping for the bait and the use of the hole in the ground. Both these elements from their simplicity would appear to belong to the original pattern. The affinity between New Zealand and Marquesas is further evident in the killing of a near relative as the initial victim, ritual inoculation, and the non-use of hereditary attendants to protect bait material.

	<i>Tonga</i>	<i>New Zealand</i>	<i>Tahiti</i>	<i>Marquesas</i>	<i>Hawaii</i>
Magical objects					
Leaves only	x	—	—	—	—
Bamboo tube	x	—	—	—	—
Bait object	—	x	x	x	x
Bait receptacles	—	x	x	x	x
Leaf wrapping	—	x	—	x	—
Hole in ground	—	x	—	x	—
Fibre bag	—	—	—	x	—
Basket	—	—	x	—	—
Stone bowl	—	—	x	—	—
Wooden bowl	—	—	—	—	x
Spirit agents	—	x	x	x	x
Images	—	—	x	—	x
Image house	—	—	x	—	—
Sorcerer's house	—	—	x	—	—
Religious affiliation	—	—	x	—	—
Treatment for cure					
Offending sorcerer	x	—	—	x	—
Different sorcerer	—	x	x	x	?
Special god	—	—	x	—	—
Special priest	—	—	x	—	—
Special religious place	—	—	x	—	—
Revenge					
Another sorcerer	—	x	x	x	—
Special sorcerer	—	—	—	—	x
Use of corpse	—	x	—	—	x
Specialized ceremony	—	—	—	—	x
Social status	—	—	—	—	x
Prevention					
Self-acting taboo	—	x	—	—	—
Ritual inoculation	—	x	—	x	—
Protection of bait					
Personal	—	x	x	x	x
Special attendants	—	—	x	—	x
Wardrobe keeper	—	—	—	—	x
Spittoon bearer	—	—	—	—	x
Personal attendant	—	—	—	—	x
Spittoon	—	—	—	—	x
Chamber-pot	—	—	—	—	x
Sanitary system	—	x	—	—	—
Latrines	—	x	—	—	—
Taboo protection	—	x	—	—	—
Warriors ritual	—	x	—	—	—

Elaboration in Tahiti, Hawaii, and New Zealand shows diversity not only in the use of material objects but also in the evolution of specialized ceremonies. Tahiti used material forms for the spirit agents, Hawaii made utensils to protect the individual chief, and New Zealand evolved a sanitary structure to protect the public. Tahiti developed a curative ceremony with apa priests and a special god, Hawaii elaborated a revenge ceremony with kuni priests, and New Zealand contributed a ngau paepae ceremony for the protection of warriors going forth to battle. Each of the three ceremonies was extremely specialized and each was peculiar to its region of origin.

In spite of its evil purpose, sorcery supplied a stimulus to Polynesian culture. It enriched the culture with various material things, rituals, social institutions, and even influenced religion. Though sorcery was based on the same elements of technique in four selected regions, three of those regions developed elaborations in diverse ways. Thus a complex based on a common pattern underwent different developments in different parts of the same culture area. This paper merely stresses an accepted conclusion, more honored in the breach than the observance, that a local development within a culture cannot be accepted as a characteristic trait of that culture for comparison with similar traits in other cultures to prove theories of diffusion.

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CULTURAL RELATIONS OF THE GILA RIVER AND
LOWER COLORADO TRIBES

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CULTURAL RELATIONS OF THE GILA RIVER AND LOWER COLORADO TRIBES

THE cultures of the Pima and Papago in southern Arizona have usually been viewed as distinct from those of the Yuman tribes located on the lower Colorado River. Recent investigation centering on the Maricopa and allied Yumans lying on the Gila between the Pima and the lower Colorado groups makes it clear that the Gila and the Colorado form one culture province. Maricopa culture is nearly identical with that of the Lower Colorado Yumans; Pima and Papago also are in large measure participants in the same culture. The purpose of this paper is to establish this relationship and in particular to show the cultural relations of the Maricopa to other Yumans to the west and to the Pimans to the east.

It is not generally known that during the last century a number of Yuman-speaking tribes were on the middle and lower Gila. In addition to the Maricopa, there were the Kaveltcadom, whose existence has been newly discovered, the Halchidhoma, Kohuana, and Halyikwamai, all of whom have been members of the Maricopa community for a century. The Maricopa have inhabited the middle Gila above the great bend from time immemorial. The Kaveltcadom are a Halchidhoma-speaking people who occupied the lower Gila below Gila Bend and are probably the Cocomaricopa-Opa of the eighteenth century Spanish explorers. The Halchidhoma, Kohuana, and Halyikwamai were originally settled on the lower Colorado River, from whence they fled eastward to join the Maricopa in the period 1825-39. Since only scanty information is available on the non-Maricopa members of this group, it is possible to assign a place in the "cultural landscape" of southern Arizona to Maricopa culture alone.

Field investigations of the Maricopa were made by the writer for the University of Chicago in 1929-30. This resulted in a general ethnographic account, "Yuman Tribes of the Gila River," which has been published by that institution. Since it seemed desirable to undertake a comparative study of Maricopa culture, the writer returned to the field in 1931-32 under grant from the Institute of Human Relations, Yale University. The present paper represents the first fruits of this investigation.

It will simplify our task to state at once that Maricopa culture was set off sharply from the simpler cultures of the Arizona plateau to the north, those of Yavapai, Apache, Walapai, and Havasupai. It remains to define its relations to the cultures of the Lower Colorado Yumans to the west and those of the Pima and Papago east and south. Comparisons with northern Mexico are not profitable at the moment in view of our incomplete knowledge of that region.

The time-honored supposition has been that the Maricopa, having moved from the west to a position adjacent to the Pima, have been culturally as well as politically dominated by the Pima. This is far removed from the truth. I will attempt to show that not only was Maricopa culture of the historic period overwhelmingly one with that of the Yumans on

the Lower Colorado, but that the Pima, at least the Piman groups on the Gila, also affiliated strongly in the same direction. So far as Piman influence on the Maricopa goes, and it seems to have been relatively small, it was balanced by an equal counter-influence.

That Maricopa culture was essentially that of the Lower Colorado tribes in all its phases accords with their linguistic relationship, since Maricopa speech is identical with Halchidhoma, differs only slightly from Yuma, and hardly more from Mohave. But this cultural similarity need not have been, for the Yuman group as a whole was culturally segmented along lines that did not follow dialectic groupings. There is discernible a Lower Colorado Yuman culture, one of upland Arizona, a third in southern California, with that of the peninsula of Lower California a possible fourth. These are not dialectic divisions. Within the Colorado River group we find the upstream peoples (Mohave, Halchidhoma, and Yuma) sharing a culture with the dialectically distinct Cocopa, Kohuana, and Halyikwamai.

In general Maricopa material culture was that of the Colorado River tribes. The basis of subsistence was identical and only in part determined by the similar physical environment. The mainstays were wild products: mesquite beans and fish. Corn, beans, squash, and melons were cultivated on the inundated flood plains without further irrigation. How early the Maricopa added a system of irrigating ditches is not clear: this Pima-like trait may not date back of the last century. For the Maricopa, corn and other field crops were an auxiliary; important, but not primary staples. Cultivation was extensive on the lower Colorado, but by no means the whole reliance. Of the Mohave Kroeber remarks that agriculture "may have furnished half their subsistence;" the use of game appears to have been slight, of fish perhaps greater, and for the rest wild seeds, of which mesquite "formed an important part."¹ No adequate estimates are available for the down-river Yumans, but we may suppose that they were cultivators only to the same degree. There seems no adequate reason why the Gila-Colorado residents might not have maintained themselves wholly or largely on corn, so extensive are the flood plains, but such was not their habit. Hunting was minimal: if rabbits formed a larger ingredient of Maricopa diet, it may have been only because they were less abundant in the Colorado bottoms.

The material arts were noteworthy for the indifference displayed in their manufacture. Basketry was largely absent among both peoples: the preference was for securing them by trade from basket-producing neighbors. What were made were simple, crude, and largely without decorative finish. They were made wholly by coiling, in identical shapes, and given identical names. Curious and yet characteristic, that in view of the exaggerated value they placed on the baskets they bought, they made little effort to manufacture them. Pottery served most domestic purposes. Generically it was the same; a relatively crude product made by the paddle-and-anvil method. Again shapes and names were identical among Maricopa and the Lower Colorado tribes. But they differed somewhat in color scheme (River red-on-buff *versus* Maricopa black-on-red or-white), somewhat in design, and in the

¹ Kroeber, *Handbook*, 735, 737.

additional Maricopa technique of refining the applied paint. Skin dressing was rudimentary, although this need not have followed from the infrequency with which they hunted big game. Dress, hair style, tattooing, and other personal ornamentation differed only in detail.

To enumerate the whole of the material arts held in common would involve repeating here the material culture sections of the published Maricopa ethnography almost in their entirety. Items range from the non-cultivation of tobacco to cradles, from the cultivation of wild seeds to sandals and woven string bags. Overwhelmingly, the material cultures were one and differed but little in detail. Such larger differences as existed will be discussed below.

If technology and tools were largely similar, the social order was emphatically the same. Witness a strong national sense, shifting settlements, and hereditary chiefs whose social position was unimportant, especially in comparison with that of the shamans and song leaders. The meeting house ("council house" is too formal a designation) may have been a Maricopa institution alone. Yet I suspect inquiry would reveal it among the Colorado Yumans: there the informality of meetings may have obscured their existence, but the structure should be discoverable. Warfare was for both people a nationalized sport: national in that large numbers were involved; a sport in the sense of displaying both a formalized procedure and a willingness to stay in the fight to the finish. They shared massed fighting, challengers and single combat, leaders bearing feathered pikes ("war standards") under no-flight obligations, division of the combatants into club- and bow-men, primary dependence on the club as a weapon, the taking of scalps only by those who had dreamed the privilege, belief in the magical malevolence of scalps and captives, and purification for killer and scalper.

A single sib system prevailed. Both had not only patrilineal, exogamous, non-localized sibs (clans) with untranslatable names and multiple totems, but the sib names and associated totems were specifically the same. They shared the further curious trait that all the women of a sib (but not the men) bore the sib designation as a personal name. Here a difference of stress. Maricopa women (and some men) had names which referred to the characteristics of their totems and only after marriage were called solely by the sib name. The River Yumans reversed this, calling all women of a particular sib from birth by the sib name, and using a personal designation, also derived indirectly from the totem, only to differentiate them. But sib names and personal names rested on the same idea: they were thought of as connoting the totems; the first by an untranslatable word, the latter by describing the characteristics of the totems. Men's names had no relation to sib affiliation, with the exception just noted for the Maricopa.² Beyond their exogamous character the

² Forde writes of the Yuma: "The sibs are not nameless. . . . Women in addition to the sib name use also frequently another name derived from some characteristic feature or activity of the namesake [totem]." And again: "Women did not formerly use personal names but were identified by their sib names. As children they were given nicknames describing some feature of the 'totem' but these were not often used when they were

sibs of both groups were functionless, save that we note the impulse of the totemites to boast of their totems. The Maricopa further integrated the calendar with the sibs: the month names were sib names, and the totems those plants appropriate to the designated month. This was probably not true of the Lower Colorado Yumans, although it may be at least suspected of the Kamia.

Their kinship systems were of identical structure, with the same strong insistence on discriminations according to the relative ages of the connecting relatives. Again there was community in the principle, strange in these markedly patrilineal societies, that children were brothers and sisters only when they had the same mother, regardless of their paternity. That is, the blood bond overrode sib segmentation.

The identity with Lower Colorado culture is established perhaps more by the religious system and its adjunct song-cycles than by any other phase of Maricopa culture. Not that there was not a substantial difference in Maricopa phrasing of the dream by which power was acquired, but they shared with the Lower Colorado tribes a belief in the predominant influence of dreaming in all departments of life. Dreaming took the place of learning in the native view: all professional status and all success was achieved by dreams. In common, they dreamed of being taken from mountain top to mountain top, where the cures and special abilities were revealed. But a material difference lay in that while among the River tribes a man dreamed himself back into the mythological past, took part with the culture heroes in the establishment of the existing order and so acquired significant knowledge, the Maricopa dreamer was conducted by a spirit helper (an animal, bird, or anthropomorphic being) in a contemporary spirit world. We are in no position at the moment to say whether the Maricopa represents an older phrasing from which the Lower Colorado form has become specialized, or whether they have been influenced in this by the Pima. On the one hand, the Maricopa form resembles generalized North American beliefs; on the other, how a Pima acquires power is uncertain. At present I incline to the former possibility. All that is essential here is to recognize that the base and form of the power experience was the same among the Maricopa and the Lower Colorado Yumans.

Shamans cured in like manner by the knowledge they acquired: spirit helpers had no part in the cure itself. Soul loss as a cause of disease and recovery of the soul as its cure were beliefs shared by the two culture groups. While in the present state of our knowledge the Maricopa alone are to be credited with the belief that most illness was acquired from a

grown" (*Yuma Ethnography*, 143, 145, 149). This does not differ materially from the Maricopa situation. Kroeber wrote of the Mohave that "all the women born in a clan bear an identical name, although they may in addition be known by nicknames or other epithets. These clan names are of totemic import, though they are not the word which is in common use to denote the totemic object" (*Handbook*, 741). But if the Mohave sibs were nameless, the question arises how did they refer to a man's sib affiliation? A recent inquiry of the Mohave showed that it was quite possible for a man to refer to his sib by the woman's name for the group; this was his own "real name" but was never used as such; that women were indeed called by a single name, but for purposes of discrimination, personal names were used (the "nicknames" of Kroeber), and that these, like Yuma and Maricopa, were descriptive of the totems.

primal stock of sickness ever afloat in the world and of which one dreamed, there are implications in the Lower Colorado data that this was also the common belief there. Forde, for instance, states that to the Yuma intrusive sickness was not an object and that sickness was acquired by bad dreaming. Something of the sort must hold for the River Yumans generally since soul loss, the sole symptom of which was fainting, could hardly cover the majority of illnesses.

The long list of song-cycles which characterized both cultures are noteworthy not only for their similarity of form and content, but for identity of function. These songs were ostensibly dreamed, numbered perhaps hundreds in a single series, and purported to describe by allusion the experiences of the dreamer. In name or subject and probably in melody, we find them duplicated in the two groups. Herzog has pointed out that the music of the Lower Colorado Yumans is a very specialized type, set off sharply from that of other Southwestern peoples, and that Maricopa songs conform to this style at least in part.³ The impression given by the informants is that similarly named songs found in the two groups were identical in melody. The difference in the content of the cycles of the two groups is consonant with the difference in the content of their dreams. Many Lower Colorado cycles, relating to the dreamer's excursions into the mythic past, were essentially myths told by allusion in song. Maricopa cycles, on the other hand, purported to relate the experiences of the dreamer as he moved from peak to peak under the guidance of his tutelary spirit. Actually the content of the songs was closer than this characterization suggests. Further, a few of the Maricopa songs were myth narratives like those of the Colorado River Yumans.

Both peoples were almost wholly devoid of ritual dancing, the singing of the cycles providing the central interest on a multitude of similar occasions. A few songs were the occasion for stereotyped, rudimentary dances; others had prescribed basket drum or rattle accompaniments; for some they stood, for others sat, and so on. So far as we know the identically named songs of the two groups were used in similar circumstances, with the same fixed adjuncts of dance and metrical accompaniment. The characteristic accompaniment in both groups was the scraping and pounding of an inverted basket.

Oratorical style was alike in both groups an abrupt, staccato, forced utterance.

Cremation was the uniform practice in both groups, with mourning even before death, with singing and orations. They shared the holding of mourning commemorations, marked by the singing of cycles and mimetic warfare; but here a difference, since the Colorado tribes, like those of southern California, added the burning of an image of the dead. The land of the dead was conceived alike as downriver in the desert, where the dead were reborn four times, finally becoming as nothing. Alike they held that twins were mere visitors in our world, reborn from a mythical village of their own. A host of minor beliefs and omens were also held in common.

Mythology, again, was much the same. Myths tell of a creation by a pair of heroes who

³ Herzog, *The Yuman Musical Style*; also in Spier, *Yuman Tribes of the Gila River*, 271-79.

emerge from a primeval sea; of their quarrel, and of sickness let loose on the world; of the death and cremation of the surviving hero; of the theft of his heart by Coyote. The incidents that then follow in the Lower Colorado versions are the coming of a dispenser of the arts and the conquest of a sky-snake. Of these, the first was hardly integrated in the Maricopa origin tale; the second missing.

Despite this long list of resemblances between Lower Colorado and Maricopa cultures, there were differences which cannot be minimized. The Maricopa differed markedly in the form of their houses and in the presence of the cotton-weaving technique. We must also recognize that the Maricopa totemic names for women, dream experience with spirit guides, their abbreviated mourning rite, as well as a whole host of minor differences in other traits, are features that set them off more or less from the River Yumans. But none of these are fundamental differences: they are rather differences in the phrasing of the same basic cultural goods. There can be no doubt that Maricopa culture and that of the Lower Colorado Yumans was in large part a single entity.

In what, on the contrary, did the Maricopa more closely resemble the Pima and Papago? On the whole, the total of such elements does not bulk large. The dome-shaped house, loom weaving, the color, design, and refiring of pottery, and painted cradle hoods were among the principal elements of material culture. Identical stick annals; the cañute game and the prominence given the kicking stick race; the sahuaro brew and its formal drinking; the begging dance; probably elements of the Vikita-Navitco complex, with its masked clown, curing with images, dance forms, and enclosure; guardian spirits for shamans: these probably represent the whole range of Pima-Papago resemblances. For all that they are numerous, most of these elements rest lightly in Maricopa culture: subtract them and it is left with all its essentials and most of its details. The most obvious external difference would lie in house form. What was the significance for Maricopa culture of the occurrence of shamans' guardians among the Pimans, and indeed how far the resemblances in all traits went in detail, cannot now be answered because of the insufficiency of Piman accounts. If the caution be raised that further inquiry among the Pimans may show more extended resemblance, the implication is rather that Pima-Papago will be found to be even more closely allied to Lower Colorado culture than we now know, since the Maricopa are themselves one with the latter in all important phases of life.

It seems not to be generally recognized that the culture of the Pima and Papago was to a degree similar to that of the Lower Colorado Yumans. I refer here to the Piman groups of Arizona and northern Sonora, and perhaps should confine these remarks to the Pima resident on the Gila River. It is not altogether easy to make a correct appraisal of their culture, but an attempt in the light of our present knowledge is permissible. The existing data are incomplete. Russell's account of the Pima, which seems to pertain primarily to those of the Gila, is full of detail, but essential points are omitted and important relations obscured. For instance, he nowhere makes clear what was the source of shamanistic power nor the meaning and use of the orations and songs he recorded. Apparently the Navitco

cult was related to the Papago Vikita, but as Russell does not give any consecutive account of the Navitco rites and Parsons refers only to part of the Navitco activities, the extent of their similarity remains uncertain. The accounts of other writers on the Pima are wholly haphazard. For the same reason, the Papago are included with diffidence. Lumholtz's meager and amateurish account is all that is now available, with Mason's and Davis' records of the Vikita performance. Nevertheless I choose to interpret the evidence as showing a substantial identity of Pima and Papago cultures until it be proven otherwise. New, reasonably full reports on both tribes, with adequate attention to local differences, are sorely needed.

It is possible to show that a large part of Pima-Papago culture was the same as that of the Lower Colorado Yumans. How large was the non-Yuman ingredient, and whether its affiliations were primarily with Pueblo or northern Mexico, remains to be seen.

Pima-Papago material culture was largely that of the Colorado River peoples. This is clearly so in basic economy. The first impression derived from Russell's account of the Gila Pima is that they have been cultivators on a large scale since aboriginal days. This is reinforced by mid-nineteenth century descriptions of the huge quantities of wheat and other produce furnished the California-bound whites who made a halting place of the Pima villages. But a casual statement of Russell's is highly significant: "mesquite beans formed nearly if not quite the most important diet of the Pimas in primitive times." This is duplicated by Lloyd: "Until very recently, mesquite beans and the fruit of various cactus plants were staple articles of food. . . . The gathering of them [mesquite] was quite a tribal event, large parties going out." Whittemore also confirms mesquite as the principal foodstuff. The Papago situation is not known in any detail, but it is clear that they were even more dependent on wild products than the Pima.⁴ The balance of the diet was largely from the usual field crops, fish, and rabbits: large game were hunted but little more than on the Colorado.

Dress was the same among the Pimans and Maricopa, although differing somewhat in materials. That is, some use was made of skins, including poncho-like shirts and moccasins among the Pimans, and of cotton cloth, unknown to the west. Tools and utensils were largely the same. Pottery was frequently made in the same specialized shapes. Cradles were the Colorado type, differing only in the painting of the basketry hoods.

Against these and other similarities, we must set off irrigation ditches, cultivation of tobacco, houses, weaving, the netted carrying frame (kiaha), and especially the high development of basketry, coiled and plaited. Even these differences were tempered: there was some flood-plain planting among the Pima and the kiaha may be related to the rectangular netted frame of the Mohave and the string bags of other River tribes. Nevertheless, the list of differences is impressive.

Their social order shows the same combination of resemblances and dissimilarities. There

⁴ Russell, *Pima Indians*, 74; Lloyd, *Aw-aw-tam Indian Nights*, 123; Whittemore, *Among the Pima*, 54; Gaillard, *Papago*, 293.

appears to have been but a single tribal chief like the Colorado River Yumans; uninfluential, and with quasi-hereditary succession. Orators were important; their speeches formalized. The meeting house was present.⁵ As I have pointed out this was a Maricopa institution which may have existed on the Colorado. While Piman warfare involved raids rather than the formalized massed combat of the Lower Colorado tribes and the Maricopa, there were, nevertheless, common elements. There was the same specialization of clubmen and bowmen, formal speeches on the warpath, the taking of scalps by appointed men, the long rite of purification for slayer and scalper, the belief that scalps were maleficent, and their careful storage by a custodian. They differed from the Lower Colorado peoples in that the scalps were used to cure the very illness they caused and also for bringing rain. Pima-Papago kinship systems were entirely of the Yuman type.

The Pima and Papago had five patrilineal sibs (the Papago possibly only four), which were non-exogamous and functionless, save that a child called his father by the name of his sib, much in the manner that the Yumans use sib names as personal designations for women. It is not clear whether the Pima-Papago all addressed a man by the name of his sib, corresponding to the Yuman usage, or whether this was confined to address by the child. The "father-word" was also used, prefixed to the appropriate kinship term, for the father's older brother and sister, and apparently for the father's first cousins.⁶ These sib names cannot be translated, just like the Yuman sib names. There was in addition a dual grouping by patrilineal descent, so that all persons were known as either Buzzard, Red People, Red Cow-killer ("Ant") or as Coyote, White People, White Cow-killer. Like the Yumans, they boasted of the totems and were concerned with them in no other way. These moieties were non-exogamous like the sibs and all members of a moiety were considered cross-cousins. Further, for the Papago at least, there is some evidence that sib and moiety groupings rested lightly on a system of village exogamy. It does not seem correct to say that the sibs were grouped in two moieties, because it is clear that no two authorities agree how the four

⁵ Each Pima village possessed a council house, which so far as I can see, was identical with the Maricopa meeting house, despite Russell's efforts to picture formal councils (Russell, *Pima Indians*, 196). Lumholtz observed in certain Papago villages a large house which was not a residence, in charge of a keeper, in which sahuaro was set to ferment for their festivities, and in which were kept paraphernalia used in dances of the drinking festival (*New Trails*, 52, 102, 106, 360). Strong interprets this as a group house with its priest and fetish, like those of Southern California (*Analysis of Southwestern Society*, 38). The cue for this interpretation lay in Lumholtz calling the house a "medicine lodge," for which he offered no warrant. The Papago name means, as he clearly indicates, simply "big [house]." The whole complex he describes is strictly identical with the Maricopa meeting house as it was used at the time of sahuaro drinking. The house is a meeting house; the keeper apparently corresponds to the Maricopa custodian who is not a priest; sahuaro is brewed in it just as among the Maricopa, and I interpret the string of feathers used at the festival and stored in the house as no more than the comparable paraphernalia used in the Maricopa Mountain Killdeer singing, and in no sense a group fetish. It may eventually be shown that the Papago and perhaps the Pima actually had fetishes which were more than individual property, but until this is shown it would be wise to be cautious in accepting Lumholtz's evidence as indicative of their existence.

⁶ Parsons, *Notes on the Pima*, 448, 450, 451, 455.

or five sibs were grouped, nor how the totemic ascription was made. It seems that we have here two disarticulate systems: the sibs with father designations and the moieties with totemic reference.⁷

The resemblances to the Yuman sib structure lie in patrilineal descent, untranslatable sib names, naming within the lineage by the sib name, and multiple totems of which they boasted. Further, the Piman totems are identical with those of the largest sibs among the several Yuman tribes. Against this is local exogamy rather than sib exogamy, the group name applied to men instead of women, and the division by moieties. The divergence is by no means as great as this formulation suggests, for the "moieties" were no more than groupings by totem affiliation. Put another way, an individual inherited a totem from his father and, in common with perhaps all others of his lineage, called his father and perhaps all older persons of his lineage by a single meaningless name. This clearly parallels the Yuman situation. The primary differences then were local exogamy and the lineage name for men rather than women.

It has been suggested that the Piman analogies were derived from the Yuman sib system. With this I concur. Certainty would be added if we were shown that these analogies occurred among the Piman groups adjacent to the Yumans but not among the Pimans farther south in Mexico. It is not necessary for our present purpose to demonstrate this derivation since we are concerned only with the extent of resemblance. It becomes significant when we realize that north of the Mexican border the resemblances hold only between the adjacent Pimans and Yumans; that there was nothing similar north and east of the Pima. The Yavapai proper to the north were sibless; the Western Apache and Southeastern Yavapai had exogamous, non-totemic, named, matrilineal sibs, localized by tradition.

Without doubt it was in religion and ritual that the Pima and Papago differed most from the Lower Colorado Yumans. Here I should like to reiterate that there is a real deficiency of data. The details of Piman religion, which alone have been recorded, contrast rather sharply with Yuman, but it may be that their fundamental formulations were more fully in accord. Here among the Pimans we note prayer plumes, offerings, shrines, color-direction symbolism, and rain-making as an objective, but we do not know whether these were minor elements of ritual or of fundamental importance. Possibly there were group fetishes, but we may be misled by Russell's designation "fetish," and I am doubtful of Strong's identification of these as part of a moiety-group (clan) house-priest-fetish complex.⁸ As the data stand they seem to me rather to have been individual medicine objects. Shamans may have had guardian spirits in some fashion. In a shaman's experience recorded by Parsons, the dreaming occurred at home in childhood, and revelation was made by a mythical being who led the dreamer through the mountains. This is suggestive of Yuman dreaming. But they also got their powers through animals.⁹ They cured by singing the songs of ani-

⁷ Russell, *Pima Indians*, 197; Parsons, *op. cit.*, 455; Lloyd, *op. cit.*, 147, 163; Gifford, *Clans and Moieties*, 174; Strong, *Analysis of Southwestern Society*, 11, 23.

⁸ Strong, *Analysis of Southwestern Society*, see especially 11, 23, 38, 45 ff.

⁹ Parsons, *Notes on the Pima*, 458, 460.

males diagnosed as causing the disease. Disease was intrusive, hence sucked out. This is non-Yuman. So is the Vikita-Navitco complex. The Vikita of the Papago was held within an enclosure, with masked dancers and the display of effigies, for curing the sick and bringing rain. Russell's tantalizing notes on the Navitco cult of the Pima and Parsons' more complete but partial record reveal similarly masked performers, possibly a curing fraternity, one of whose functions was to cure by means of effigies. How far the identity went remains unknown: the Pima themselves assert that Navitco was derived from the Papago.¹⁰ Possibly there was other ritual dancing in the Piman groups, but it cannot have bulked large since it does not figure in such accounts as we have. In the comparative absence of ritual dancing they resemble the Yumans. The Papago salt gathering expeditions, with ritual purification, and in which the Pima participated, were non-Yuman. Taken as a whole, religion and ritual are distinctly suggestive of Pueblo and north Mexican affiliations.

With the Piman song series we are in doubt. Possibly their content was similar to that of the Yumans, but at least the melodic structure was different. Herzog wrote that "the Pima also have dreamt series but the connection with ceremonialism is stronger. In other respects, Pima [melodic] style is not comparable to Yuman, except for the absence in both styles of singing habits which are universal further north."¹¹ Some at least of the Yuman songcycles were known to the Pima, presumably in their Yuman form. There is evidence that all songs of the Pimans were derived from dreams, according to native theory, just as among the Yumans.

Piman mythology centered differently from that of the Colorado tribes. Piman creation myths emphasized emergence and the struggle to drive out the earlier occupants of the land. But many of the Yuman incidents were present in these myths and perhaps most of them in the body of Piman mythology. Taken in the large, Piman mythology, like their religion, faces differently from that of the Yumans.

It is not our purpose to maintain that Pima-Papago culture was so completely like that of the Yumans on the Lower Colorado as the Maricopa. But the common element bulks large, and even in the fields where our knowledge of Piman culture is equivocal, the chance is as great that they will be proven alike as otherwise. It is not unreasonable to insist that Pima-Papago be classed with the Lower Colorado culture, even if only as a borderline case.

There is nothing wholly novel in this view; rather in its emphasis. Kroeber has earlier noted the impressive number of isolatable traits which the Gila Pima and Colorado Yumans have in common, without however carrying the implication to its conclusion.¹² Nor did he apparently recognize that the Arizona Papago were perhaps equally participants in the same general culture.

The question still remains whether the Yuman ingredient of their culture was derived

¹⁰ Russell, *Pima Indians*, 266; Parsons, *op. cit.*, 462.

¹¹ Herzog, *The Yuman Musical Style*, 200. See also his *Musical Styles in North America*, 457.

¹² Kroeber, *The Seri*, 50.

from Maricopa-Kaveltcadom, and perhaps from Papago contacts with the Cocopa, or directly from the more centrally located Colorado tribes, the Yuma and their neighbors. There is the further alternative of conceiving Piman and Yuman forms as local phrasings of a widespread culture centering to the south in Mexico. As the data stand, they suggest the material arts are part of an ancient common culture, and that those features of Yuman social organization and the few Yuman items of religious culture found among Pima-Papago were derived later from the Maricopa-Kaveltcadom and perhaps from the Cocopa.

A further decision whether the non-Yuman phases of their culture should be classed with Pueblo or northern Mexican cultures must depend on what is ultimately learned of the Sonora Pima and other tribes of northwestern and central northern Mexico.¹³ Kroeber seems to assume that the non-Yuman elements were ancient Piman traits which will also be discovered among the Pimans to the south.

The trend of this long discussion has been to fix the cultural position of the Gila River tribes close to those of the Lower Colorado. Nine-tenths of Maricopa culture was Lower Colorado in type, despite the remodeling of the dream experience and the song-cycles. It was certainly not a reflection of Pima culture. Such Pima-like elements as they possess and which are not present among other Yumans—houses, weaving, features of pottery and basket making, elements of the Mountain Killdeer dance, sahuaro brewing, dancing at the girls' rites, and the like—are balanced by quite as many Yuman elements among the Pima and Papago, for which association with the Maricopa may be held responsible. Of the other Yuman residents on the Gila (Halchidhoma, Kohuana, and Halyikwamai) we can only state that the few data obtained show full evidence of their earlier residence on the Colorado. What little is known of the Kaveltcadom is Maricopan. Piman culture seems to have been appreciably closer to that of the Colorado Yumans than is generally recognized, yet certainty must wait on more extended work among the Pimans.

The Lower Colorado culture province should thus be expanded to include the Gila River tribes, Yuman and Piman. This stands in contrast to the culture of the Arizona plateau, at bottom a Great Basin culture, participated in by Havasupai, Walapai, Yavapai, Tonto, and with a heavy gloss of Pueblo features, by Navaho and Western Apache. In an earlier formulation of this cultural distinction,¹⁴ I included Pima and Papago with this upland group. A more careful reading of the accounts of the Pimans, especially in light of my fuller understanding of Lower Colorado culture, makes it clear that this was an error; that

¹³ Parsons has made a case for Pueblo affiliation of Pima religion, particularly with the western Pueblos. Yet it is pointed out that the ceremonial systems were radically different, the conspicuous similarities lying in details of ritual. Parsons does not seem to appreciate, however, that some of the similarities cited do not show specific Pueblo-Pima connection, but are equally Yuman or quite widespread (such as four as a pattern number, color-direction association, spitting in exorcising, sucking out disease, tabu on salt, beliefs concerning scalps). The connection of the Navitco cult with the Papago Vikita is not recognized. While the Navitco certainly resembles Pueblo curing cults, it has also northern Mexican affiliations like many other features of ritual. We may note also that Parsons recognizes a great difference from Pueblo in the Pima social organization (Parsons, *Notes on the Pima*, 457 ff.).

¹⁴ Spier, *Problems Arising from the Cultural Position of the Havasupai*, 214.

the Pimans should rather be grouped in the Lower Colorado province. In a frankly programmatic paper,¹⁵ Kroeber views just such an expanded Lower Colorado province as forming with its imperfectly known north Mexican affiliates a larger Gila-Sonoran culture area.

A detailed tabular statement of Maricopa relations with Lower Colorado and Piman cultures is appended. This incorporates and materially expands an earlier comparison of Lower Colorado and Gila Pima published by Kroeber.¹⁶ After the list was drawn up, all points in which the Maricopa resembled or differed from the others were checked with Maricopa informants. It may well be that inquiry among the other tribes would show that traits listed here as peculiar to the Maricopa were also present among them. No check of this was made. Further, no attempt has been made here to list specific resemblance of Lower Colorado and Piman traits beyond what was common to the two and the Maricopa (as listed in the first column).¹⁷

In basing judgments on these tabular statements it must be understood that no such presentation is capable of including every item. Nor does it do full justice to the extent and character of resemblances and dissimilarities. For instance, the single entry "Song-cycles" includes a whole host of items that are similar, while the very real difference in content is barely suggested. I would like to add that it is for this reason that a statistical expression of the interrelations between the cultures based on these tables would have little value.

The extent to which the mythologies of the three groups agree has been tested by comparing their creation tales. This may not be a fair sampling. Harrington's Yuma creation myth was chosen as the only available full record from the Lower Colorado. I have heard a version practically identical among the Mohave. Similarly, Russell's Pima myth is the fullest now available.¹⁸ A number of incidents of the Yuma and Pima tales were known to the Maricopa in stories other than the creation myth, namely, those I have called "Kwistamxo" and "Coyote." It is not feasible to present a detailed comparison of the tales here, hence a summary statement must serve. I have been able to isolate sixty-nine incidents in the Yuma origin tale, fifty-six in the three Maricopa tales, and forty-nine in the Pima creation myth. Of the fifty-six Maricopa incidents, thirty-one are duplicated in the Yuma origin tale and twenty-five in the Pima creation myth, with three appearing in the Pima tale of Coyote. That is, the count shows that the Maricopa share about half of the Pima incidents and half of the Yuma, with the resemblance slightly favoring the Yuma.

But this bald count is wholly inadequate to show wherein the resemblance really lies. The Yuma origin tale is duplicated in the Maricopa tales of creation and of Kwistamxo, and covers somewhat more ground than these Maricopa tales. This is the story of two heroes who emerge from a primeval flood; one is blinded; they create clay figures; one

¹⁵ Kroeber, *Native Culture of the Southwest*, especially 378-81.

¹⁶ Kroeber, *The Seri*, 44-47.

¹⁷ Numbers which appear in the table are page references; without initial to Russell's work, prefixed by K to Kroeber's *Handbook*, L to Lumbholtz, Ll to Lloyd, P to Parsons' *Notes on the Pima*.

¹⁸ Harrington, *Yuma Account of Origins*; Russell, *Pima Indians*, 206-30.

sinks under the earth. The survivor allows Rattlesnake to kill, whereon the people are enraged, his daughter Frog swallows his excrements, and he dies. Coyote is excluded from the cremation and flees with the dead hero's heart. The hero's successor, Kwistamxo, causes the Colorado to flow and from a mountain instructs the people in the arts. In a somewhat different and abbreviated form much of this appears in the Pima creation tale, with the emergence and Kwistamxo incidents missing. The Pima tale then proceeds with Coyote as a marplot: first he involves his brothers in a seduction, then he liberates deer they have impounded. This is duplicated in the Maricopa tale of Coyote. The Pima creation tale then takes a wholly different turn, depicting a series of struggles to drive out earlier occupants of the land. None of this appears in either Maricopa or Yuma origin tales. In short, the Maricopa origin tale proper is a duplicate of the Yuma version; the middle segment of the Pima tale appears as a separate tale among the Maricopa; and on the whole the phrasing of the Pima origin is quite different from the homologous Yuman stories.

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ELEMENTS OF CULTURE AMONG THE MARICOPA, PIMAN, AND LOWER COLORADO TRIBES

<i>Common to Maricopa, Pima-Papago, and Lower Colorado Yumans</i>	<i>Common to Maricopa and Pima-Papago</i>	<i>Peculiar to Maricopa</i>	<i>Peculiar to Lower Colorado Yumans</i>	<i>Peculiar to Pima-Papago</i>
FOODS, ETC.				
Staples: mesquite, rabbits, fish, and corn (74, 82, 83, L 123)				
Watermelons much used (75)				
Infrequent use of mescal (agave)				
Cotton cultivated	Canal irrigation	Planting-stick as hoe	Side-scraper hoe	Side-scraper hoe (97, L 69)
Absence of seed beater	Tobacco: wild or traded			Tobacco cultivated (76)
Little hunting for large game		Wafer bread Some use of deer dis- gulse		(Stick) (None?, but same grid- dle) (68, 129)
	Rabbit nets	Rabbits "poisonous"	Curved rabbit club	
	Twitch-up trap	"Log-cabin" bird cage or trap (102)	Scissors trap and dead- fall trap	
	Occasional shooting of fish	Squirrels tabued (80, 81)		Quail tabued to women (80, 81)
	Fish scoop of sticks; conical fish basket			?
	Seines			(83, 192)
	Fish broiled and stewed			
HOUSES				
Rectangular main frame: earth covered (L 51)	Dome-shaped: door to east		Hip-roofed: door to south	(Rectangular?) (155)
Flat-roofed, earth covered shade (K 739)	Meeting house			?
	Three-forked pot stand (127)	True sweat lodge: fire inside		
	Breechcloths, and kilts of cloth and deerskin	Women's kilt: narrow strands	Women's kilt: separate back and front pieces: hustle (?): broad strands	Deerskin shirts (157) Moccasins (157)
	Woven cotton robes	Men's leggings		
	Women's underapron	Men's hair: not arti- ficially lengthened (?)		Runner's hair ornament (also Yuma?) (163)
			Women: sometimes sol- id area	
			Tattoo: men on chin	
			Multiple holes	
			Ear piercing: single hole	
DRESS, ADORNMENT				
Breechclout for men, kilt for wom- en, of willowbark (157)				
Rabbit-skin and willowbark (?) robes				
Barefoot habit: sandals for trav- eling of fiber and rawhide (117, 122)				
Men's hair in long rolls, women's loose (158)				
Mesquite and clay hair dressing (159)				
Tattoo: women on chin (162, L 110)				
Face paint: vertical lines predom- inate; hand across eyes (161)				
Nasal septum pierced (usually brave men) (163)				

ELEMENTS OF CULTURE AMONG THE MARICOPA, PIMAN, AND LOWER COLORADO TRIBES (Continued)

<i>Common to Maricopa, Pima-Papago, and Lower Colorado Yumans</i>	<i>Common to Maricopa and Pima-Papago</i>	<i>Peculiar to Maricopa</i>	<i>Peculiar to Lower Colorado Yumans</i>	<i>Peculiar to Pima-Papago</i>
HABITS Women carry burdens on head: head ring (89, 113, 140, L 70ff.)				
Smoking: cane tubes	A lively humor Obscenity freely used	?	Carry torches to warm selves	(Also in netted frame) Tear salutation (?) (200) Smoking in circuit (P 459)
POTTERY Same character: sand temper: paddle and anvil (124f.)	Pottery used rather than basketry Identity of shapes and names	No design names	Designs named Colored red on buff	
BASKETRY Coiled baskets: jar-shaped storage basket (143)	Baskets traded rather than manufactured Identity of shapes and names	Some shapes in common Patterns after firing: refired: similar designs: colored black on red or white Similar designs (?)	Twined baskets	Coiled basketry highly developed: design names (139) Plaited baskets with lids (145) Sleeping mats (93, 134, 147)
Nest-like coiled granaries				
WEAVING			(Occasionally by Yuma)	
VARIOUS UTENSILS	General crudity of all manufactures Woven string bags	Coiled hurden basket	Netted rectangular carrying frame	Netted tripod carrying frame (114a) Carrying net (as saddle bag?) (113, L 331)
Rectangular, unboxed metate: long mano (109) Wooden mortar: long wooden or stone pestle (75) Little skin dressing: seeds for tanning (118, L 331) Cradle: U-frame, ladder, basketry hood: carried on head or hip (103-4)	Metates dressed with stone axes Sahuaro hook (103) Sahuaro seeds for tanning Cradle hood painted (104, 164) Cloth swing (156) Sex of child indicated by designs of band (K 536)	Conical travelling mortar of twined sticks Sex indicated by designs on hood	Tule rafts and large pots for ferries	

ELEMENTS OF CULTURE AMONG THE MARICOPA, PIMAN, AND LOWER COLORADO TRIBES (Continued)

<i>Common to Maricopa, Pima-Papago, and Lower Colorado Yumans</i>	<i>Common to Maricopa and Lower Colorado Yumans</i>	<i>Common to Maricopa and Pima-Papago</i>	<i>Peculiar to Maricopa</i>	<i>Peculiar to Lower Colorado Yumans</i>	<i>Peculiar to Pima-Papago</i>
WEAPONS					
Bow: D-shaped: self-bow (95)	Some use of reed arrows	Arrow-straightener lacking (111)	Sinew-backed bow	Grooved arrow-straightener Long clubs (?) Little used	
Arrows of arrowweed: usually lack beads (96, 111)					
Clubs: "potato-masher" type (96)					
Stone axe lacking (110)					
Armor lacking					
Circular shield	Lance (pike): little used	Identical decoration (120)			
GAMES					
Ball (not stick) for kicking race	Hidden ball game	Kicking-ball racing favored (173) Relay race	Ring and pin: no score board	Hoop and pole favored Spiral score board	Spiral score board
Ring and pin game (rind rings) (180)					
MUSICAL INSTRUMENTS					
Reeded flageolet (166)	Gourd rattle (168, 315)	Women's double-ball shinny (172) Dice with scoring circuit ("quince") Cadute bidding game (176)	Open flute Trench drum Deerhoof rattle	Deerhoof and cocoon rattles (169, 170) Notched rasp (167, 266)	
Drum: basket beaten and scraped (167)					
SOCIAL ORGANIZATION					
Tribal solidarity	Farm lands owned (88)	Sib names in common	Disputes settled by allotment (?) Pushing match and stick fight	(Papago ?) Distributed by allotment (?) Patrilineal moieties: nameless Applied to moieties (P 456)	
Freely moving settlements					
Patrilineal sibs: untranslatable names (197)	Applied to sibs	Sib exogamy Women bear sib names	Mourning for intra-sib marriages	Fathers called by sib names (P 455)	
Totemism: multiple totems; indirect reference; same totems; boasting of totems					
Men's names (after marriage) frequently of sexual reference to women (188)	Strong reluctance to use names of living and dead	Some men bear names of totemic reference			
"Yuman type" kinship system (P 445)	Half siblings by same mother called full siblings				Naming rite (wholly Spanish ?) (188) Children may not use own names (188)

ELEMENTS OF CULTURE AMONG THE MARICOPA, PIMA, AND LOWER COLORADO TRIBES (Continued)

<i>Common to Maricopa, Pima-Papago, and Lower Colorado Yumans</i>	<i>Common to Maricopa and Pima-Papago</i>	<i>Peculiar to Maricopa</i>	<i>Peculiar to Lower Colorado Yumans</i>	<i>Peculiar to Pima-Papago</i>
SOCIAL ORGANIZATION (Continued)				
Single (?) hereditary chief little influence: ability dreamed				Chief selected: hereditary bias (?) (196, P 447)
Chieftainship (?) (190) (196)				
War leader selected				
Meeting (in meeting house) (L 52, 106, 360)				
MARRIAGE				
Patrilocal residence				
Test of housewifery at marriage (184)	Continence at marriage	Sororate (184) Woman takes initiative in divorce (?) (184)	Levirate	Dance director (196)
Male transvestites (L 353)	Female transvestites Change of sex caused by (over)-dreaming			Ceremonial induction of male transvestites
BIRTH				
Limited couvade (185)	Conception due (?) to dreaming Twins merely visitors (re-born)	Birth in menstrual lodge (Pima ?) (L 357)	First-born twin called the younger	Purification rite for child (Spanish ?) (187, L 357)
		Preference for male children (185)		(Not repeated ?) (183, P 464)
PUBERTY				
Girls' rite: four or eight days; repeated at subsequent menstruations	Girl "roasted" in sand Girl tattooed	Dance with girl	Be-stinging ordeal for boys	Youths trained four days in tribal legends (197)
DEATH CUSTOMS				
	Mourning before death: singing or orations Cremation: orations Heart believed last consumed Mourning commemoration with singing and sham battle			Burial: occasional cremation on warpath (193, 194, 202)
			Image burning in mourning rite	Shaman's paraphernalia cached (256)
WARFARE				
	War as sport: massed combat, challenges, championous: dependence on clan	Forays: dependence on bows		

ELEMENTS OF CULTURE AMONG THE MARICOPA, PIMAN, AND LOWER COLORADO TRIBES (Continued)

Common to Maricopa, Pima-Papago, and Lower Colorado Yumans *Common to Maricopa and Pima-Papago* *Peculiar to Maricopa* *Peculiar to Lower Colorado Yumans* *Peculiar to Pima-Papago*

WARFARE (Continued)

Specialization of clubmen and bowmen (120, 202)

War headdress (116)

Clairvoyance by shaman on war-path (202)

Set speeches on warpath (202)
Sentries posted about village (201)

Scalps taken only by those who dream
Scalped leaders only (?)
Scalps forecast warfare

Preference for scalping alive

Scalps used for cures and to bring rain (P 461)

Scalps carried in war

Young women (197)
Children (197)

Year begins with saturday harvest (35)
Twelve or thirteen month names (36, 176)

CALENDAR

Scalp maleficent: scalp custodian: stored in meeting (?) house (P 461)
Captives cause disease (265)
Purification for scalpers: isolation, fasting, bathing: 16 days duration
Captives sold

Stick annals (identical details)

Thunder and lightning anthropomorphized

Identical names for some local mountains (e.g. 216-7, 278)

SONG CYCLES

All songs theoretically acquired in dreams

Songs in series (possibly similar) (271, 285)

Content: self-projection into myth narrative

Content: guardian spirit experience

SHAMANISM

Shaman's dreams involuntary (no quest)

Hereditary tendency (?)
Guardian spirits for shamans (257)

No private spirit allies

Shamanistic novices also instructed (?) (257, P 458)

Some quest for spirit helpers
Spirit resorts dreamer between peaks on cord

ELEMENTS OF CULTURE AMONG THE MARICOPA, PIMA, AND LOWER COLORADO TRIBES (Continued)

Common to Maricopa, Pima-Papago, and Lower Colorado Yumans	Common to Maricopa and Pima-Papago	Peculiar to Maricopa	Peculiar to Lower Colorado Yumans		Peculiar to Pima-Papago
SHAMANISM (Continued)	Mountains as spirits Dreaming replaces learning for professions		Dream patterned on four-fold division of night		Distinction of shamans for curing and weather-control (?) (P 461) Woman shamans cure only abdominal disorders (262) Curing by masked Navitco (266, P 462) Sickness due to intrusion; sucked out
	Shamans killed for failure to cure (?) Sickness due to soul loss; shaman brings back soul Sickness due to dreaming the disease		No women shamans (?)		
		Curing by effigy			
	Shamans brush and spray (260)		Brushing with left hand	Curing by applying sand (K 777)	Curing by songs of animals diagnosed as causing disease. Feathers and rattle used (261) Stone tablets for curing (112, 266)
LIFE AFTER DEATH		Bewitching common; "shoot" charcoal from cremation (262, P 460)	Songs of white encouraging, of black despair		
	Heart (soul) becomes owl (252)	Land of dead downstream: rebirth four times; finally becomes beetle or charcoal	Twins reborn from separate village		Land of dead to east (26, 194, 253) Death due to Sun and Night (193, 251)
VARIOUS RITUAL ELEMENTS	Orations of fixed content and occasion	Pulses (souls) become screech owls Whirlwind is soul (ghost) Orations with abrupt, forceful delivery Datura taken individually to forecast future	Datura taken to induce dreams of spirits	Some drinking by groups	Datura as intoxicant (?) (299)
	Frequent use of four as ritual number		No special ritual tabu on salt	Ritual restriction on salt	Frequent color-direction symbolism Ritual restriction on salt (266) Prayer-plumes: shrines: meal sprinkling (106, 254, L 103, 108, P 464)

ELEMENTS OF CULTURE AMONG THE MARICOPA, PIMAN, AND LOWER COLORADO TRIBES (Continued)

<i>Common to Maricopa, Pima-Papago, and Lower Colorado Yumans</i>	<i>Common to Maricopa and Lower Colorado Yumans</i>	<i>Common to Maricopa and Pima-Papago</i>	<i>Peculiar to Maricopa</i>	<i>Peculiar to Lower Colorado Yumans</i>	<i>Peculiar to Pima-Papago</i>
VARIOUS RITUAL ELEMENTS (Continued)					
Tabu on game killed by young man	All game tabu	Bull-roarer	Bull-roarer a toy	(Occurs among Yuma)	Bull-roarer for rain: call audience
	Noise of inanimate objects ill-omened		Eagle feathers "poisonous"	Tabu on deer and mountain sheep permanent	First deer Tabu (191)
RITUAL AND DANCE					
Dance form: opposed lines of men and women moving to and fro: rare occurrence of circling dance (170, 183, 203, 289)	No ritual dancing				Little ritual dancing (250)
Harvest dance alone called "dance"		Name song (begging dance) (171)			
		Sahuaro brewing and celebration (70, L 51, 93, 119, 148)			With rain-making (347)
		Elements of Vikita-Navitco dance	Killdeer butterfly performance and dance (in war dance); masked clown (derived from Vikita-Navitco?)		Rain-making Vikita-Navitco: masked singers; corn symbolism; rain-making; sun and moon: curing by touching effigies (91, 108, 168, 175, 266, 326, 328)
				(In Halchidhoma mourning rite)	Audience of village groups oriented
			"Moving-the-king" dance		
			Prediction by swallowing dirt piles and by smoking		Salt gathering expedition, with purification (94, L 269)

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HOPÍ HUNTING AND HUNTING RITUAL

INTRODUCTION

ALTHOUGH Hopi economic life is based fundamentally on agriculture, the hunting of wild animals plays a not inconsiderable role in the total economy of this desert people. The rabbit and other small game, eagle, and coyote are the only animals hunted to day, but formerly, when white contacts were few and grass more plentiful, abundant larger game roamed the Hopi country. When Whipple in 1854, and Ives in 1860, made their entrada into this region both reported numerous signs of the black-tailed deer, antelope, mountain sheep, mountain lion, grizzly bear and gray wolf, as well as the smaller game already mentioned. Possibly the Hopi, at one time or another, hunted all or most of these animals, though some more regularly than others. It is noted in this connection that Hough, in his examination of ruined Pueblo sites in the vicinity of the present Pueblos, found the bones of such carnivora as fox, coyote, wolf and puma much rarer than those of deer, antelope and rabbits. He found no bones of bear, but bones of beaver and small rodents, and of birds like the turkey, eagle, hawk and owl were frequent.¹ Fewkes, in excavating Awatobi, destroyed about 1700, found in one of the rooms a large bear skeleton which he suggests was a carcass awaiting consumption at the time the town was burned.² Today, however, for the larger animals, the memory of hunting seems to cover only that of antelope, deer and mountain sheep. One may conclude that these were regularly hunted whereas the lion and bear were killed, if at all, only through chance encounter and then because of necessity, not choice, never through regular expeditions sent out in their pursuit. The following is characteristic of this attitude:

Long ago when the people were living beside Corn Rock where the ruins are today, an old woman went out to collect firewood. On her way home she was killed by a bear. Her relatives, searching for her next day, found her bones. Near the spot, they marked the rock with the imprint of a bear's paw. They were too frightened to try and punish the bear by hunting it.

All the animals hunted were used either for ceremonial purposes alone, or for food, materials for clothing and blankets, and for the manufacture of items of material culture as well. The total phrasing of the complex has also been affected by factors other than those centered about the food quest. First, the characteristic ritual emphasis of Hopi society, and the application of ritual to hunting in order both to improve hunting methods and to secure the conservation and increase of game. Second, the habits of game in fairly open country, such as surrounds the Hopi Pueblos which necessitates the use, as a major technique, of patterns involving the rounding up or running down of game. Thirdly, the danger of hunters being attacked by enemy raiding parties and hence the necessity of hunting in

¹ Hough, *Archaeological Field Work*, 356-57.

² Fewkes, *A-wa'-to-bi*, 371.

large groups for the protection thus afforded. Beside the social values arising from communal hunting methods, the hunt itself gives to the Hopi the opportunity to indulge in the pleasure and excitement of rapid movement that sets a premium on such elements as chance and skillful daring. In this respect much of the fascination that the hunt has for the Hopi appears to depend upon the contrast of these values with the monotonous routine work, the long-continued and patient toil implicit in all agricultural operations, and in the round of sedentary indoor winter activities.

In this paper I wish to describe the various aspects of the hunting complex in Hopi culture with reference to the ritual that accompanies each stage of the hunting cycle. I do not consider snake hunting in the present context, since it has already been adequately studied in accounts of the snake and antelope ceremonies in Dorsey, Voth, and Fewkes.

· ANTELOPE AND DEER HUNTING

According to all my Second Mesa informants antelope and deer were hunted by the Hopi in but two ways. In earlier times, when horses were scarce, individual animals were hunted by running them down on foot. Two men with provisions and water gourds slung over their shoulders would seek an antelope trail. Finding it, they followed it all day, slept on it at night and took it up again in the morning, thus keeping going until the animal was sighted. Then they could get close enough to shoot with bow and arrow or else throw the exhausted animal to the ground and choke it to death. The men always hunted in pairs "to help each other." The second was the common Hopi method. The detailed account here given is a composite one compiled from information obtained from two men, Sak'masa of Mishongnovi (S), and Yusi'ima of Shipaulovi (Y), both of whom had participated in many hunts when they were youths. The following story tells of the origin of antelopes:

The Hopi emerged from the Underworld and wandered around from place to place. At last they stopped at Burro Spring. There were many snakes here, however, which fatally bit the children, so that the people were once more obliged to move on. There was one woman in their company who was about to give birth to a child. She managed to accompany the wanderers only as far as Giant's Chair where she remained alone while the others went on to a place by Corn Rock where they decided to stay and build a village. Next day certain men went back to find out how the woman was getting on. They found that she had given birth to twins which were like little antelopes with horns on their heads. They also found that the mother had become an antelope as well. Although the three wanted to remain where they were, the Hopi brought them back to the mesa. They were unhappy in the village so the Hopi later sent them back to the place *nixgī'gi*, where they made a hole in the ground and let the animals live there. The mother the Hopi called *nixgī'gi wī'xni*, Mother of all Animals. They gave the antelopes prayer sticks, and have done so ever since so that the antelope and deer may increase in number and be hunted for the good of the Hopi (S).

Both antelope and deer were hunted in the region around the buttes to the southwest of the villages and on towards the Little Colorado River. The best time to hunt was after the Snake Dance and after the women's dance (*lago'n*) in the Hopi moon months corresponding to August and October (*ba'mī'ia'* and *lago'n mī'ia'*) when the animals were

fattest; in December when snow might make it difficult for the animals to run fast and their tracks would also be plainly discernible; and again in March and April "when the peach trees are in blossom and the animals have their young with them" (Y). Any man might arrange a hunt (dʒiʃlalai'wisa), thus becoming a hunt chief (mo'ηwi). The hunt chief makes two prayer feathers, one for the Gray Fox (kwe'wi'i), and the other for the Mother of All Animals. These he takes to the Badger clan chief, announcer of hunts "because the Badger clan own all the animals," four days before the hunt is to take place.³ Both smoke a corn husk cigarette and then the projected hunt is discussed. The announcer calls out the hunt using the pseudonyms "rat" (ka'la) and "mouse" (siwi'ηwa) in his announcement to mean "antelope" (dʒi dʒi'fda) and "deer" (bi'sa) respectively. This is so that the animals may not hear themselves referred to and so run away before the hunters approach. Another explanation is that the katsina soyo'ku', when she comes to the village in winter to ask the people to hunt for her, always refers to the larger animals in these metaphorical terms, and "as soyo'ku' speaks, so must all the Hopi speak when a hunt is announced" (Y). Later the announcer takes the two prayer feathers to dixgi'gi, the shrine of the Mother of all Animals, placing them there with corn meal and prayers that good fortune and no injury shall be the lot of the hunters. The hunt might be announced also in other villages on the same mesa and anyone who wished was at liberty to join the party, lads as well as men.

During the four days before the hunt the men prepared equipment and weapons while the women made food for them. Continence was necessary. Dreams were looked upon as omens: to dream about a girl and have dream intercourse with her was a bad omen; to dream of a girl with whom one is enamoured without dreaming intercourse was good.⁴ It was unlucky not to dream at all; it was also a sign of bad luck to wake in the morning feeling drowsy and sluggish.

The hunters left the village on the fifth day. In the old days, for antelope as for all other types of hunting, the proper dress for the hunter was a ceremonial kilt; the body was covered with yellow pigment, and an eagle feather was tied in the hair (Y). The remains of the sunflower blossoms used as face pigment by the women in the laco'n was taken by the men after the dance and used by them to rub on throwing sticks, and behind both ears and on the face, for good luck (S). Neither informant had any knowledge of the use of the flower of the scarlet gilia mixed with sacred meal which Hough mentions as being used in antelope hunting without, however, specifying the manner.⁵ Y thought it was a Navaho and not a Hopi practice. Throughout the time the hunters were away from the village they might not joke or laugh, but had to be serious minded, thinking only of the hunting and the

³ Hunts are announced by the Rabbit clan chief at First Mesa (Parsons, *Hopi and Zuni Ceremonialism*, 21' 57). There is no Rabbit clan at Mishongnovi and announcements are made by the chief of the linked Badger clan. At Shipaulovi where there are only two clans, Bear and Sun, the village crier, and I think the hunt crier also, is a Mishongnovi Water clansman married to a Shipaulovi woman. There is no Mishongnovi Badger clansman married or living in Shipaulovi.

⁴ Cf. p. 10 ff.

⁵ Hough, *Environmental Interrelations*, 140.

killing of animals. Nor might they have bad thoughts towards each other or be uncooperative in the hunt, since this too would bring bad luck to the expedition. The women and men left behind in the villages might help the hunters to secure good fortune by rubbing ashes from the cooking fires behind their ears after the men left the village and further, by thinking no evil thoughts while the men were away.

Camp was made as near as possible to the location of the herd of animals, but in no particular fashion. The men ate and then rid themselves of the odor of women and babies which antelope and deer dislike, by drawing the hands over the legs, holding them to the mouth and blowing out with the breath, doing this for each part of the body in turn. Later they sat around the camp fire, in village groups if men from more than one village were present, and each man made six prayer sticks: one for the Mother of all Animals, one for Hunting Man deity (ma'k di'wi na'ka), one for Coyote so that Coyote would be prevailed upon to chase the animals at night and so tire them out for the next day, one for Earth Father (Masau), one specially long prayer stick for the antelope and deer to bring about their breeding and increase, and a final stick for the Sun. The sticks were collected into five bundles, those for the Sun being kept apart and dedicated to this deity on the following morning at sunrise. On a large plaque a section of turquoise necklace was put with the bundles and the plaque placed in the middle of the circle of men. The men sat upright with arms on knees while the leader sang special hunt songs. These songs were known only to one man now dead, and they could be sung only at hunting time without ill-fortune overtaking the singer (S). The plaque was smoked over by all the men. After all had eaten of sweet corn meal dough (kwī'mi), two men were chosen to take the prayer sticks to a place away from camp, sprinkle them with meal, and pray for success, and then hide themselves under a blanket some distance away to listen for omens. To hear the sound of wolf, coyote or crow was good because coyote and wolf were chasing the animals and tiring them out, with crows gathering round their carcasses, thus foreshadowing death to the animals. To hear nothing at all or to hear the sound of bells was bad because the bells were jingled by the animals as they ran away from the hunters.⁶ The two men returned to camp, and after all had smoked again, the report was made and then all could sleep. If the omens were bad, the hunt was held just the same, but with no hope of success, and the whole procedure would be repeated on the following night.

At sunrise the leader offered the sixth bundle of prayer sticks to the Sun deity with prayers for success. A small fire was lit, and each man passed his hands through the smoke to make them strong. After eating breakfast all mounted their horses. Two men acted as leaders to form a two wing circle some miles in diameter, and another pair went inside the circle to rouse the animals and chase them toward the hunters waiting on the periphery. The animals were chased until exhausted. The bow and arrow, later the gun, were sometimes used to bring down the largest animals, but approved practice was to throw the

⁶ Perhaps the bells were also ill-famed, because they represented survival in folklore of evil attached to the bells of the Spanish mission churches.

exhausted animal to the ground, point its head towards the village that rain might go in that direction, and then grasping the nose and jaws with the hand, press the head into the sand until the animal was smothered. No food or corn meal was sprinkled over the animals at this or any other time. The head was turned towards the east before skinning began. "To kill antelope or deer by cutting the throat or letting blood run from a wound causes a whirlwind and sandstorm; to smother them enables their spirits to go to their home and so to live again on earth" (S).

Each animal killed was divided among the killer and the next three men to arrive on the scene, making four divisions altogether. The animal was skinned and butchered immediately. An incision was made along the breast and the skin taken off towards the back and legs. Incisions were made under each side of the jaw and the tongue and breast were removed. The internal organs were drawn out through this aperture. The tail was left on the hide but the head was cut off. The blood was allowed to drain into the stomach cavity. The intestines were taken aside, their contents emptied on the ground, sprinkled with meal, and prayers made over them for the increase of animals and for rain. A fire was built, the liver roasted and eaten by the hunters. The killer received the horns, hide, head and body after portions were divided as follows: the first man to arrive received the left fore leg and the right hind leg; the second the right fore leg and the left hind leg; the third the internal organs and the blood, which he either drank immediately or cooked later over a fire.

After returning to the village each hunter wiped off and blew away with his breath the odor of antelopes, as previously he had rid himself of the odor of women, so that the antelope spirits might not trouble the hunter by haunting the village. Each hunter also took a bowl full of lighted juniper, bark and leaves ($\gamma\gamma\dot{\imath}$ ·'maxbi), and smoked himself over this as an aid to purification. The bowl and the ashes he afterwards placed on the shrine "done with hunting" (ma'knavo·'bzibi) situated on the ledge of the mesa below Mishongnovi village. The skin, meat and head were carefully seen to; to leave them lying about the house while the hunter slept would bring him sickness or death (Y). On the day of return only the tongue might be eaten by the hunter and his immediate family; usually, most of the meat was sun-dried and preserved for later use, while the remainder was reserved for a feast on the following day. The meat was cut up and boiled with hominy. A cob of yellow corn called Mother Corn, was placed at the bottom of the stew bowl and a cob of white corn called Father Corn, was placed on top of the meat. At times Father Corn was placed in the mouth of the animal and cooked there in place of the tongue. There was no pointing in the six directions with the cobs of corn. When the meat had finished cooking a feast was held to which relatives and friends were invited. The hunter's paternal aunts brought with them wafer bread and other corn foods to add variety to the menu; sometimes all the guests did likewise. Each guest took a bite of the Mother or Father Corn before tasting any meat in order to keep a healthy stomach and so avoid sickness. The aunts ate first of the tongue and then of the ordinary meat; after they had eaten, the other guests joined in the feast. The bones and skull of the animal were carefully placed aside, neither broken up for the

marrow nor given to the dogs. Each bone was marked along its length with a streak of red ochre, and the skull was similarly marked on the eye sockets, jaws and nose. Before sunrise on the following morning, the bones sprinkled with meal were placed on a shrine *nīdī'ska* close to the village with prayers for the increase of animals; the skull with the antlers also, if the latter were to be put to no practical use, was placed on the shrine *ma'kna vo' dzī bi* with similar prayers.⁷

In connection with the above description the following account of an antelope hunt in which he participated as a youth was volunteered by Y:

Informant went hunting with a party in December. On the trip to the hunting location he saw a falling star which meant good luck because it foretold falling antelope. Half way from Shipaulovi to the present bridge over the Little Colorado River near Winslow the party came upon antelope tracks, camped, and took omens. Y heard the sound of coyote, crow and eagle hawk: the omens were good. On the next morning he and another man saw three animals, one of them a large buck with a disabled leg. The buck headed towards the buttes, so he left his horse with his friend and trailed the animal on foot. After a long pursuit he came up with the buck which fell into an arroyo and could not get out. He threw the animal over and choked it to death. He lit a small smoke fire. His friend saw this signal and came up with the horses. He gave his friend a fore and a hind leg and some meat for assisting him to skin the animal and pack the carcass back to camp. The hunters arrived back at the village in the afternoon. Y's wife made hominy and stew, and on the following morning his paternal aunts and friends came to eat.

Various other techniques used in hunting deer and antelopes have been attributed to the Hopi, the chute and pound method,⁸ stalking in animal disguises,⁹ the use of sounding gourds as decoys.¹⁰ But all my informants agree that these methods were not characteristic of Hopi hunting and were never used in the Second Mesa villages. The chute and pound is considered to be a Navaho method purely, though S said it was occasionally used by First Mesa Hopi who had learned of it from the Navaho. The animal disguise was attributed to Zuni and Navaho, not to Hopi, though here again culture contact may have introduced it to First Mesa. Y asserted that if a Hopi man dressed in a deer skin or antelope skin at any time other than during a ceremony, he would become crazy and die. Of the gourd decoy, informants had heard of its use in eastern Pueblos, but were vague about the matter. Other techniques, such as driving animals into pits, setting fire to brush and thus driving animals together, drawing animals over mesa edges or into natural culs de sac, or waiting for animals at drinking places were all quite unknown to informants. Dogs were occasionally used to assist in running down animals, but were not specifically trained for hunting; they were given children's names and taught to answer to call.

⁷ Parsons, *op. cit.*, 57.

⁸ See the accounts in Stephen, *Hopi Journal*, Bourke, *Snake Dance*, 72, 84, and Hough, *Hopi Indian Collection*, 285. I am indebted to Dr. E. C. Parsons for her kindness in allowing me to consult Stephen's journal while it is still in proof.

⁹ Hough, *loc. cit.*

¹⁰ Hough, *op. cit.*, 296.

Beliefs and customs concerning antelope hunting other than those already mentioned were rare. The meat of animals was always eaten even though the skins were used for ceremonial costumes. There were no beliefs about the person who wilfully wasted venison, though one suffering from convulsions, a common complaint in former days, should eat no meat from antelope, deer or mountain sheep. The meat from deer, antelope or other animals killed by coyote or mountain lion was never eaten. Such meat "smelled" and caused sickness if consumed. Special prayer feathers were made at the winter solstice and placed on the shrine of Masau to secure the fertility of animals and good fortune in hunting. There was no use of deer calculi as hunting charms.

Special precautions had to be adopted in trailing the albino antelope or deer (*masi'tcu viwa'*) in order to be sure that the animals did not circle round the hunter. If this happened the hunter would be crazed "like a drunken man" and die. When it was evident that the animal was going around in a circle the hunter had to break up the trail with his hand or with a stick. "This is good for you" and saves from craziness another hunter who might otherwise unwittingly find himself inside the circle. If a hunter were caught inside such a circle the only cure was for him to take a piece of skin from the albino when it was killed, place the skin in a bowl with lighted juniper, and thoroughly smoke his head over the bowl. Another informant believed that being caught inside the circular tracks caused blindness to the hunter and his horse; smoking with juniper was a cure for blindness of both man and animal.

The skins of antelope and deer were softened and preserved by being first scraped and then rubbed with the brains of the animal dissolved in hot water, and the skins were afterwards pegged out in the sun to dry. They were variously used for clothing, moccasins, leggings, arm bands, shields, bags, masks, riding gear, lariats, and drum heads. Sinew was used for bow strings and for sewing, hooves and antlers for rattles, necklaces, items of ceremonial costume, wall hooks, arrow wrenches, basket-making implements, and the like. The scrotum was filled with sand, dried in the sun, and used as a rattle.

MOUNTAIN SHEEP HUNTING

The following data on the hunting of mountain sheep (*bava'ηdu'*) is mainly from information given by Y since he is one of the few very old men still alive who remember the method with any completeness. I give his account in some detail. The method appears to follow that for antelope hunting in general patterning but presents interesting elaborations.

The time for hunting mountain sheep was in September, when the animals were fattest, usually after the *ma'zγau* festival. Any man might arrange a hunt and become a hunt chief (*maḵ mo'ηwi*), but only the older men would assume this responsibility. The hunt chief made six prayer sticks, one for the Mother of All Animals (*niḡi'i wi'xdi*); one for Earth Father (Masau); one for Sparrow Hawk (*ki'ʼsa*); one for Eagle deity (*gwa'i*); one for Gray Fox (*kwe'wī'i*); and one for another animal deity (*pzo'hona*). By making prayer

sticks for these animal deities the chief assured himself that the hunters would be as successful as these deities are in their own hunting. The hunt chief took these sticks to the Badger clan chief. The two smoked together, and the hunt leader explained the purpose of his visit, using metaphorical language referring to the hunting of rats, mice and other "meat substitutes." The Badger chief then called out the hunt four days ahead and placed the prayer sticks on the shrine *baḡa'tcwa* near the rock *sibu'ḡdīḡwi* below Shipaulovi village.

During the next four days, food, equipment, and weapons were prepared, and everything made ready for the expedition. Continence was necessary. Beside the dreams given in the preceding section as fortelling good or ill luck, the following were also mentioned as likely to affect the fortune of the hunter whether he dreamed them in the village or in the hunting camp: to dream of Masau or to experience a similar "nightmare" and to awake with the body stiff and paralyzed with fear was good luck; to dream of an accident or of somebody being hurt was bad luck, and the hunter should not have gone hunting or else, if he went, he had to be particularly careful about observing hunting customs and proscriptions.

On leaving the village the hunters assembled at the place *dīdīḡwi'* where they waited for laggards and for men from the other villages on the mesa. They made camp near to the buttes or canyons where mountain sheep were to be found, built a fire, and each man took ashes in his lefthand and circled them over his head six times in an anti-clockwise motion. The ashes were thrown away and with them the odor and contagion of women. Thereafter the hunter for the duration of the hunt had to keep his mind fixed on the killing of animals and take no further thought of women under the penalty of misfortune's overtaking him. There is the same idea here as in antelope hunting of ridding the hunter of contact with women but the specific technique varies slightly. Parties of men, grouped either by villages or by friendship, then made for themselves little round shade houses of brush and grass called hunt houses (*maḡgi*). There was no order in the arrangement of these, nor any protecting fence about them. A man slept inside or outside as he pleased but always with his equipment and weapons ready for a surprise attack. In going out of the hunt house a man turned left at the entrance and walked round from the back to the front again before going any place; he did not walk straight out of the door under penalty of sickness. After the hunt houses were built the men ate, and later each hunter made six prayer sticks, one for each of the hunting deities mentioned earlier. These were placed on a plaque and taken away from the camp for omens. When the omens had been reported to the hunters, the hunt chief called out the hunt to the camp, referring as before to the hunting of rats and mice. All might now go to sleep.

Early next morning the hunt chief built a fire over prayer sticks and put animal droppings and grass on it; each hunter passed his weapons and his hands through the smoke. The men went out on foot in the two-winged circle formation. Using dogs to assist and making much noise, they tried either to drive the sheep into a cul de sac canyon or else to drive them over a mesa edge in such a manner that the animals would be killed outright or

severely injured. The incapacitated animals were choked to death or else shot with bow and arrow. Those that took refuge on inaccessible rock ledges were lassoed with ropes of braided wool, hauled to the top of the cliff and then choked with their heads turned in the direction of the villages. At the end of the day the kill was skinned and butchered. The skinning procedure was like that described for antelopes. The meat was cut up into equal parts and the meat placed together. The chief divided all the meat equally between all the hunters present, save that the killer of the animal received in addition the skin, hooves, and horns. All the meat, together with the internal organs and the blood collected in the stomach bags, was taken back to camp. The internal organs were eaten immediately, as was the blood cooked with sheep fat. In the evening the heads were roasted over the fire: "if you were not too tired and fell asleep early you had a good supper of roasted sheep heads." The topics for evening conversation would refer to hunting, hunting stories, incidents of the day and the like. The dogs were fed on offal, never on bones or meat.

The men stayed in the hunting camp and hunted for four days. On the final day's hunt all but two of the sheep captured were killed. These two, a male and a female, were let go free "so as to make more sheep for the next hunting." Before breaking camp to return to the village each man purified himself with ashes from the fire, casting the ashes in the opposite direction from the village. Each man who had actually killed sheep took a long cotton string to which he tied a number of prayer feathers at equal intervals, thus making a giant prayer feather (*hi'kws'i*). This he placed on the ground near the camp, with the skulls of the animals he had killed in a row on top, each skull facing toward the rising sun. The skulls were sprinkled with meal and prayers were made that the spirits of the animals might go to their homes there to live again.

On return to the village, each hunter smoked himself with juniper (*ny'i'ma'xbi*), and the bowl of ashes was placed as before on the shrine *ma'knavo'dzibi*. The meat was cut into thin strips, boiled, sun dried and stored in piles in the storeroom "just as corn is stored." The meat to be used immediately was boiled with hominy and the usual feast was held on the next day, the paternal aunts bringing wafer bread and other foods, and eating first of tongue, heart and meat before the remaining guests ate. The bones were carefully put aside, painted with red ochre, and placed on the shrine, *diviska*.

RABBIT HUNTING

The organized communal rabbit hunt, termed "hunting" (*ma'kiwa*),¹¹ is still held at irregular but frequent intervals throughout the year, most frequently in early summer and autumn when fields must be protected from the depredations of the rabbit and when there are eagles in the village to be fed each day, less frequently in winter when the hunt forms a welcome relief from indoor life, though only when weather conditions permit. Hunts are often held in connection with ceremonies in order to provide meat for feasting or for dis-

¹¹ Note that rabbit hunting is thought of as "hunting" and not qualified by any descriptive term such as "rabbit" hunting.

tribution to the villagers. There is a closed season, however, during the making of prayer sticks at the winter solstice and for four days afterwards. During these days rabbits are supposed to have time to increase in numbers; this is in line with the concept that the prayer sticks made at this time help towards the fertility of all animal life. But since the ground is considered specially thin during this month called "danger moon" (c'a'mi'ia'), it is dangerous to break into the earth, so no animals, not even rabbits, should be dug from their holes during the whole of the moon.

Any man in the village may organize and lead a rabbit hunt, thus becoming hunt chief (ma:k mo'ηwi). The day before the hunt he makes six prayer sticks, four for the rabbits themselves, one for Gray Fox deity, and one for the Mother of All Animals. He takes these to the house of the Badger clan hunt chief in the evening. Both smoke a corn-husk cigarette; then the leader tell his plans for the hunt. The hunt announcer calls out from his housetop the next day's hunt. He calls toward each of the four cardinal directions, naming the meeting place for the hunters and accurately specifying in succession the areas of land which will be hunted. Later he places the prayer sticks for Fox and Mother of All Animals on the shrine dixgi'gi. Omen dreams are similar to those mentioned previously, but there is no taboo on intercourse with women.

Early next morning the hunt chief goes to the announced meeting place taking with him the four prayer sticks. Here he makes a circular clearing in the sand and in this, a small basin-shaped depression. From the four cardinal directions he makes four lines of meal meeting at the central intersection, starting from the north and proceeding anti-clockwise. A prayer stick is placed on each line with the feathers meeting in the center. On top of the sticks he puts grass, brush, animal droppings, and sand bearing the imprint of the rabbit tracks. The brush and grass is then lit.¹² As the hunters assemble each throws a handful of grass on the fire and passes his throwing stick through the smoke. This causes the stick to throw straight. When all are ready the fire is covered with sand. The hunters spread out in the two-winged circle formation, twenty-five yards or so apart according to the number present and the area to be beaten. All then walk towards the center of the circle beating the bushes and killing the rabbits with throwing sticks as they are flushed. When two men flush the same rabbit the animal belongs to him whose stick hits it first. The same procedure is repeated over adjacent areas until it is time to return to the village.

On occasions when rabbits are numerous and doing marked damage to the crops, the procedure may vary slightly. Representatives from each kiva are expected to participate. The hunt leader remains beside the partially sand-covered fire throughout the day, taking no part in the actual hunting. The hunters set fire to the brush and grass as they advance toward the center of the circle. This variation was formerly also used in hunting coyotes by the communal method. Lowie notes that in the days of organized coyote hunting, mem-

¹² Parsons, *op. cit.*, 21, 57, states that the Rabbit clan chief announces the hunt, makes the prayer sticks, and builds the hunt fire. This is evidently First Mesa practice only.

bers of the Coyote clan did not at first participate in a coyote hunt, saying that coyote was their uncle, but later they would not hesitate to join the hunters.¹³

Judging from brief entries in Stephen's journal, rabbit hunting ritual varied slightly between the mesas. Stephen notes that young hunters would often deposit at special shrines on the night before the hunt eight prayer sticks for Masau, Earth Father, and four for the Mother of all Animals; this to ensure success on the following day. The four rabbit prayer sticks were sometimes laid over a depression on a heaped up sand mound and meal sprinkled round the rim of this depression. Again, all the hunters, after assembling, might assist the leader in building the ritual fire. None of these variations was referred to by my informants. They may well occur at First Mesa only. I have already referred to the difference of functions attaching to the office of hunt announcer on the two mesas.

Usually only men and boys participate in a communal rabbit hunt, whether it is the two-winged circle type on foot or fanwise beating of larger stretches of country on horseback, the common method today. Occasionally however, on the day after an important dance festival like the niman katsina, or again after a girl earns the right to wear the type of hair dressing termed *ñoli'ini*, a hunt is held in which the unmarried girls go out with the hunters. This mixed hunt is called *neya'η ma'kiwa*. The usual ritual is performed. The men move off and the girls either follow in a group or else deploy in line, alternating with the men. When a man kills a rabbit, youth and maid race for it, with the rabbit going to the person reaching it first, or else the man holds up the rabbit and the group of girls nearby race for it. She who reaches him first receives the rabbit. It is the custom for each girl to give a present, a special corn food (*somí'vigi*), for each rabbit she so obtains. Now the return present is sometimes bread, cake, or wafer bread, and sometimes the hunter complains the modern maid returns no gift at all. This combined hunt is the occasion for good humor, merry-making, and courtship activity. In this respect it is paralleled by the formal group walk which youths and maidens take together on the day after a public dance ceremonial.

On returning to the village the hunter takes his kill to his house. His wife or mother lays the rabbit on the floor with its head pointing in the direction of the hunting ground, sprinkles crumbled wafer bread or corn meal over the body and breathes a twofold prayer; first, that the hunter may be successful on his next hunt, second, that the rabbit will be satisfied with the food sacrifice and allow his children to be caught by the Hopi. The women skin and dress the meat. No blood is allowed to drip on the floor for this would weaken the feet of all those who walk on it. The blood is caught in a bowl and thrown out. The gall bladder, a part of the ear, and some wafer bread are thrown into the fire, kept in the house for a few days, or else thrown away outside the house, and the above prayer is repeated. The animal is fed whether it is killed in an organized hunt or by a solitary hunter. It was customary for each hunter to give one rabbit from his kill to the leader. This is falling into abeyance today, but it is still usual to present one rabbit to the hunter's senior paternal fe-

¹³ Lowie, *Notes on Hopi Clans*, 338.

male relative in part fulfillment of the complicated economic and social obligations that bind together the "child" of the father's clan and his father's female relatives. After meal has been sacrificed and the rabbit dressed, the meat is usually thrown into the stew pot and cooked with corn and squash. The feet are prepared on another occasion and served with special pancakes of blue meal. Formerly the skins were scraped, softened by rubbing with brains and then cut into strips and twined on a cotton foundation to make robes, saddle blankets, and the like. Today the Hopi consider this too laborious a task, so the skins are either thrown away or used when needed as brushes in whitewashing.

That rabbit hunting plays a not unimportant role in Hopi life is shown by two further facts: first, special hunts are regularly held in connection with the observance of calendrical ceremonies; second, initiation of youths on the rabbit hunting field is equivalent to full hunting initiation. An example of hunts connected with particular rituals are those associated with the annual *wi'wĩdzim* ceremony held in November of each year. On the day that the crier chief announces this ceremony a rabbit hunt takes place. In the extended initiation ceremony the rabbits are given to the initiates; in the short ceremony, when no initiations are made, the rabbits go to the society members themselves. On the sixth day of the ceremony a hunt is usually held by the four constituent societies celebrating the *wi'wĩdzim* ceremony. In 1891 Stephen noted full details in his journal. The Singers, *wi'wĩdzim* and Horn society members, each with an ear of corn in the left hand, hunted as one group; the Agaves as another. The hunt lasted all day; in the evening the hunters returned with many rabbits, other small game, and quantities of firewood. Each society took its game to its kiva where the animals were dressed. Later the Agaves carried most of their game to the dance court and presented it to the women of the village. The kill of the other societies was distributed in the form of gifts to the various households by members dressed in ceremonial costume. In another performance of this ceremony (1898), Fewkes noted that immediately following the conclusion of the ceremony each of the four participating societies organized an elaborate society rabbit hunt, occurring each on its own day. The game so obtained was eaten by society members in a feast held in the kiva they occupied during the ritual performance.¹⁴ The hunts connected with *wi'wĩdzim* and other major ceremonies do not appear to possess ritual or esoteric significance in themselves. Possibly their chief purpose is to provide meat for the feasting that usually occurs at some stage of the ceremony, and also one suspects, to break or provide an outlet for the high emotional tension inevitably associated with the functioning of major religious patterns.

HUNTING INITIATION

The ceremony of hunt initiation (*ma'k'va'gi*, or *gi'gi'daŋwa'*) appears to be a product of the intense Hopi interest in all phases of hunting. Though it nominally occurs in connection with rabbit hunting it may not be literally construed as initiation into rabbit hunting only, since formerly it was not customary for a youth to hunt larger game such as

¹⁴ Fewkes, *New-Fire Ceremony*, 119.

antelope or mountain sheep without first being initiated on the rabbit hunting field. Such initiation was looked upon as a general hunting initiation and informants were concerned to stress the point that it did not concern rabbit hunting to the exclusion of the hunting of larger game. In this sense it is merely a continuation of the same interest in hunting that dictates the custom of cutting the umbilical cord of a boy on an arrow shaft and then wrapping the dried cord round the shaft before thrusting it into the roof beams of the house; all this that the boy may develop into a good hunter in after years.

Hunting initiation occurs when a boy kills his first jack rabbit (so'wi). He may have been going out with hunting parties for some time previously and have killed the cottontail rabbit (da'vo) or the yellow cottontail (si'kya da'vo), but since these are considered easier to kill than the jack, initiation waits on the later event. When this occurs, the hunt is stopped and all the men gather round the boy. His father, or a kinsman if the father is not present, chooses the best hunter on the field to act as hunt father (ma'k na'ad) to the boy "because he wants the boy to be as good a hunter as this man." As in the old days the men hunted clad only in breech cloth, pigment, and moccasins, so today the boy is stripped of his clothes. The men form a circle round him holding each other's wrist. A relative takes the boy by the shoulder and bends him forward with his back turned towards the north. The hunt father takes the dead rabbit and swings it across the boy's back from left to right leaving a blood mark on the flesh. This is done for the other three cardinal points, the boy's back being turned toward them anti-clockwise. The boy receives the rabbit, which he may later eat if he so wishes, and the hunt is resumed. During the next three days the boy may eat neither salt nor meat. Each morning before sunrise his hunt father takes him to do'ji'va spring below the mesa to bathe; both are unclothed save for a breech cloth. The father totally immerses the boy in the water four times each morning, gives the boy some of the water to drink and then presents him with four prayer sticks which the boy plants, one at each side of the spring in the four cardinal directions, praying at the same time for health, strength and skill as a hunter. This is done on each of the three mornings.

On the third day the boy's paternal aunts make a corn dish (bi'kami), and his mother makes hominy stew. In the evening a hunt is announced for the next day. On the morning of the fourth day the boy eats salt and meat in the stew, and a feast is held at his mother's house. He is then taken to the house of his hunt father's mother or sister. His hair is washed and he is given a new name, according to customary naming ritual, by the father's female relatives who also present the boy with gifts of piki and sweet corn food (kwī'mi). His hunt father presents the boy with two curved painted throwing sticks (gī gi'wu'dzkoḥī', the unpainted curved stick is bu'dzkoḥī'), and dresses him in white ceremonial skirt, sash, and moccasins. Bells are tied about his waist, necklaces of turquoise are placed round his neck, and a bunch of white eagle and parrot feathers tied in his hair. The boy's body is also painted with a broad yellow line across the chest from shoulder to shoulder and short parallel horizontal yellow lines are painted above and below the elbow of each arm and above and below the knee of each leg. Each cheek is painted with two vertical lines of red

ochre. White meal is rubbed over the rest of the face.¹⁵ The hunt father dresses in ceremonial skirt and moccasins, with a feather in his hair. His body is painted with two horizontal finger marks of yellow paint on both legs, thighs, forearms, upper arms, sides of the chest and stomach. On each cheek he has two vertical lines of red ochre.

On arrival at the hunting field, the hunt father makes the ritual fire. When the hunters assemble they ask the boy his new name and this is announced by the hunt father. The men thereupon call the boy by his new name. The boy is chosen to lead one of the two wings as the hunters move off. The first few rabbits that the boy kills he gives to his hunt father to pay for the two curved throwing sticks. Thereafter he gives some to the hunt father's relatives whenever he cares to do so. There is no prohibition against the boy's eating of the first rabbits he kills. The boy calls his hunt father "my hunt father" (i'ma'k na'an), and the father calls the boy "my hunt son" (i'ma'k di'i).

Though the hunting father teaches the boy hunting ritual and the arts of the skilled hunter, there is no formal instruction in the actual techniques of hunting large and small game. The boy is expected to learn of these things from old men telling hunting stories in the kiva during the winter months and from close observation of the behavior of other hunters when on his first hunting expeditions. The age at which a boy is initiated depends upon his own initiative, inclination, and luck. Today boys from about the age of twelve upwards go out regularly with the hunters if they can obtain the use of a horse or burro, and then it is only a matter of time before they acquire sufficient skill with a throwing stick to kill a jack rabbit they may chance to flush.

The curved throwing stick is thought to possess special virtue. According to a legend mentioned by Stephen, the Hawk deity (ki''sa) owned the prototype of this stick, which was modelled after the shape of his wing. Long ago, when the Hopi had only the bow and arrow, a boy went to the Hawk deity and from him obtained the first stick. Its special virtue, and that of all sticks made after it, consisted in the fact that when stood up vertically with the grasping handle on the ground and its curve pointed towards a rabbit, the animal was magically drawn towards the stick and was thus easier to kill. Second Mesa informants did not recall the legend but vouched for the specific value of the stick. In spite of its legendary virtues, however, the hunter does not use the curved throwing stick exclusively. More often than not he tucks five or six straight, pointed throwing sticks into his belt before leaving the village, and throwing these with skill and accuracy, finds them as efficient as the curved stick. Moreover, they are easier to replace should any be lost or broken during the day's outing. The solitary hunter occasionally uses a rifle today for small game. The throwing stick, however, remains the favorite, and be it said the safer, weapon for those

¹⁵ The paint design as given by Stephen, presumably for First Mesa, is: the body painted red, with white stripes on the outside of each leg and arm, the cheeks and chin being streaked with red ochre. Stephen suggests this costume and painting was formerly worn by all rabbit hunters, but has survived today only in connection with initiation. I have already mentioned the old time hunting costume as given by my own informants. They did not think the ceremonial skirt was ever worn at a time other than this and believed also that yellow was the characteristic color for hunting decoration.

engaged in the large communal hunts. Rabbits are never choked to death for the reason that they would be too difficult to catch.

OTHER SMALL GAME AND BIRDS

Rabbits, coyotes, prairie dogs, rats, mice, badgers, porcupines, and small birds are all trapped by the dead fall method or else by the use of snares. Bird snaring is called *dzi'oi'iwa* and the snare *wivo'si*. It is done by the older boys and youths, usually in winter when heavy snows make it difficult for the birds to find food. Snares are set on the flats about the village, sometimes near a spring. Twisted horse hair is made into a running noose two inches in diameter. A series of nooses are set two inches apart on a stick, often on an old arrow shaft. The stick is placed on the ground and steadied by large stones at each end. Corn meal or seeds are strewn about the stick and in the nooses. All species of birds are so snared. Suitable feathers are used for dance costumes, specifically for the feather face screen in the mask of the female impersonators of the *niman he'mi's katsina*. Flesh of the larger birds is roasted and eaten.

In the trapping of small game such as field mice and the like the trap is called *caḡa'mi*. Formerly a man would set many of these traps round the edges of his fields when vermin were troublesome at or after planting time, the weight of the stones used depending upon the size of the animal he desired to catch. The trap consists of a ground stone and an incline stone both about twelve inches square and three inches thick. The inclined stone rests at one end on the ground stone and at the other end it is supported by two sticks both about four inches long and the thickness of the index finger, one stick standing vertically on the ground stone and the other supported horizontally at right angles on top of the upright. To the distal end of the horizontal stick a cotton or woolen cord is tied which passes round the upright and is fastened to a crosspiece. A tension stick rests against the inclined stone at one end and at the other rests against the cord, pressing it against the upright and holding it at a tension. Meal is sprinkled on the surface of the ground stone. An animal enters the trap and dislodges the tension stick. This loosens the tension on the cord and cross stick. The inclined stone can now overbalance the upright, pushing the sticks outward and falling on the animal eating beneath it. The action of the trap is illustrated in Figure 1.

For trapping larger animals a modified trap is used. For coyote it is called *i's caḡa'mi*, for fox *kwe'wi caḡa'mi*. As before there are an inclined stone and a ground stone, each about two feet square and eight inches thick. The ground stone is firmly embedded in the earth and the inclined stone anchored at one end to prevent slipping. It is inclined at an angle of about 30° and is supported by a stick twelve inches long and three quarters of an inch thick which is set up in the middle of the ground stone. Suitable bait is tied to the stick with yucca fiber. In getting at the bait the stick is disturbed and the inclined stone falls. See Figure 2. When the hunter sets his trap he places a prayer stick and a small piece of turquoise or shell bead on the ground close to the trap and prays that coyote or fox may come from wherever they are and enter the trap. He does this today even when setting a

commercial steel trap. This is done for coyote and fox, and not for rats, mice and prairie dogs, because the Hopi do not believe that the latter animals possess souls, and so they do not have to be propitiated as do the larger animals. Neither fox nor coyote is eaten. Coyote skin is sold today to the trader; fox skin is of value because of its importance in ceremonial costume.

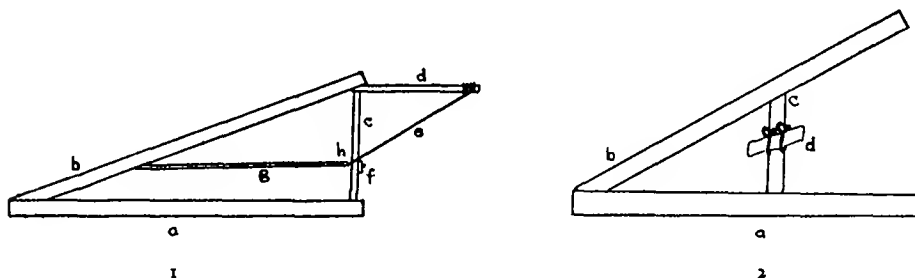


FIG. 1. Trap for mice and small game. a, ground stone; b, inclined stone; c, upright stick; d, horizontal stick; e, cord fastened to distal end of d, passing behind c, and fastened to the crosspiece, f; g, tension stick resting against b and holding the tension of the cord at h.

FIG. 2. Trap for coyote and fox. a, ground stone; b, inclined stone; c, vertical supporting stick; d, bait tied on with yucca fiber.

EAGLE HUNTING

The Hopi hunt and keep eagles in the village for ceremonial purposes and not in connection with the food quest. The buttes on which eagle nests are to be found are owned by the various clans in each village and under no circumstances do members of one clan trespass on the buttes owned by another group. The buttes are situated in the country surrounding the mesas and may be forty miles or more away from the village. Clan ownership rights are established by legendary accounts of clan migrations which usually relate, along with other incidents, how the clan in question came to possess particular buttes. Unfortunately the Navaho are unable to appreciate the Hopi viewpoint on this matter, and their rival claim to control certain buttes is at present the source of much petty quarrelling, and was probably in former times a potent cause of inter-tribal warfare.

Two varieties of eagle are recognized by the Hopi: the ordinary black eagle (gwa'') and the bald eagle (ni'va'k'gwa'a, "snow eagle"). The men know of two ways to hunt both varieties, the pit trapping technique and the nest robbing method. According to S both methods were formerly in use, the first being employed by men whose clans did not in the past own eagle buttes. Other informants, however, believed that pit trapping was the only method formerly used, though none could explain why it is not practiced today. Y volunteered the statement that for the hunter to pit trap today would result in virulent sores breaking out on his back, so bad that they might result in his death; but Y was unable to elaborate further his remark.

The following information was collected on pit trapping of eagles.¹⁶

In May or June men would go out to high mesa promontories or buttes, owned by their clan (gwa'ma'kci, "eagle hunt places"). Six or more men would go out together and be away from the village for two days and a night. They would take with them prayer sticks, a small plaque, a small pottery bowl, and some turquoise to place on the eagle shrine with prayers for the fertility of eagles and success in hunting. These gifts are made today as part of the nest robbing method and the objects may be briefly described here. The plaque is made by the clan mother, plainly coiled, without design, unfinished, and about four inches in diameter. It is believed that the older eagles will finish coiling the plaque and find it useful as a foundation for next season's nests. The valuable turquoise is to compensate the eagles for the loss of their young or of their companions. The pottery bowl is filled with water that the eagles may not suffer from thirst and desert the buttes, "since eagles are just like Hopi and like to drink water."

On some of the more rocky buttes small permanent stone enclosures about four feet in height were erected. The top was covered with a grating of wooden beams to which a bait of dead rabbits was fastened. When an eagle alighted on the bait the hunter grasped it by the legs and drew it into the house. This use of stone enclosures was known to one informant, but the method described by all informants was for the hunter to choose a sandy spot, dig out a small pit or depression in the sand, and erect over this a small round shelter of brush and grass "like a Navaho hogan, three feet high." These shelters (gwa gwa'dka "eagle house") were easily rebuilt from year to year. At the entrance to the shelter, which faced in no particular direction, a stout stick about two feet long was firmly fixed in the ground and supported by a rock pile where necessary. A live rabbit was tied to one end of a rope about two feet long and the other end fastened to the stick. The hunter hid himself in the shelter and sang a song similar to the following eagle song, to magically attract the eagles. The song is called gwa ma'k daw'wi, "song of the eagle hunt place."¹⁷ Sung by Y.

ε'nai da di'a
They are coming
gi'a gi'a 'a'lio 'a'lia 'a'wia
The eagles
o gwa' do o gwa'imo
Come in Sit down
gi'ai na we nai he'na
Walk into the house
o be'o lo ge'si'da
Enter

¹⁶ It may be compared with Fewkes, *Property-right in Eagles*, 700-701, since it supplements much of his brief account; see also Curtis, *North American Indian*, 12: 33-34.

¹⁷ Most of the words are so obsolete that the interpreter was unable to translate them; the given translation is necessarily free.

ya'ilo ha gwi
 Come into this place
 o be'olo ge'si'da
 Enter

When the eagle, thus called, swooped down and securely fastened its talons into the bait, the hunter stretched out his arms and grasped the eagle. He placed it on the ground and forced its head into the sand, killing it by suffocation. Each eagle was immediately skinned, prayer feathers were tied to beak, wings, and legs, and the bird buried in the ground or thrown into a rock fissure. Informants knew of no custom which dictated that one of the eagles so caught would be freed with a prayer feather tied to one leg: this is contrary to Fewkes' and Curtis' statements; nor could they corroborate Curtis' remark that one of the eagles would be eaten by the hunters, informants commenting on the impossibility of such behavior in the light of Hopi eagle belief.

Eagle hunting today by the nest robbing method is carried out each year in the early part of June, that is, at a time when the eaglets are beginning to mature but are not sufficiently advanced to fly from the nest when the hunter approaches. An expedition to the clan buttes is arranged by several men of the same clan. The trip is on horseback; provisions for three or more days together with the requisite ritual objects and necessary camp equipment are taken. The ritual objects consist, as mentioned earlier, of prayer sticks, plaques, turquoise, pottery and sacred meal. The prayer sticks may be made at the preceding winter solstice or else just prior to departure from the village. On arrival at the buttes, the shrines are visited and the appropriate offerings made. One of the hunters is lowered by his companions down the face of the butte by means of a rope, until he is level with a nest. With one hand he takes an eaglet from the nest, using the other hand to ward off dangerous attacks by the adult eagles. If an eaglet flutters to the ground on the approach of the hunters it is followed on foot until captured. No eggs are ever taken from the nests, and the hunters are well satisfied if they obtain one or two eaglets each year. Should three birds be found on one nest, it is bad luck to take all three for the same clan. Two are kept and the third is brought back to be given to a relative in another clan, or else any man is welcome to capture the third from the butte. To transport the birds to the village, a framework of sticks is made about twenty inches square and padded with rags and grass (gwa da'bi). It resembles in some respects the cradle board without its hood.¹⁸ The bird is wrapped in a cloth to prevent it clawing or biting and is then tied to the frame and "made as comfortable as possible." The frame is slung over the left shoulder with cords attached to the top of the frame and hangs down the right back with the head of the bird uppermost. It is only released from the frame when one leg is securely fastened to the cross bar on the roof of the house in which the hunt leader or the clan mother lives. Since the birds come from clan-owned buttes, they are considered to be children of the clan. In theory the clanswomen are

¹⁸ Two frames are figured by Voth, *Notes on the Eagle Cult*, plate 49.

supposed to assemble, wash the head of each eagle with gypsum, and ceremonially name the eagle according to its sex with an appropriate clan name. More often in actual practice, however, the hunter himself whitewashes and names the eagle, adding a streak of gypsum to the back of the bird, and making a further splash on the external wall of the house for each eagle captured "so that the downy feathers underneath each wing will be white." Only birds taken from the buttes are so named. Hawks are often caught on the wash, tethered to the roof beam, and the feathers also used ceremonially. They are treated thereafter in a manner similar to eagles, but are not considered children of the clan.

The birds are fed each morning on crushed meat. Hence the necessity for frequent rabbit hunts while there are eagles in the village. If the rabbit meat is not available, young pups or an older dog are butchered. The birds are well fed to make the feathers large and glossy. On the occasion of the niman katsina festival, katsina bring to the eagles miniature presents similar to those given to the boys and girls of the village—small, flat, painted katsina dolls, and bows and arrows. These gifts are hung up beside the birds and imply further recognition of the status of the eagles as clan children, really, "as dead Hopi who have returned to the village disguised as eaglets."

The prescribed time for killing the birds is on the day following the niman dance. If, however, the birds are not sufficiently mature by this time, killing is deferred until the day after the niman festival in another village. The bird is first given a substantial meal. This is to give its soul ample strength to fly back to the buttes after death. Its head is covered with a cloth and the bird is killed by pressure exerted with the arms or foot on the heart and throat. Any man may do this whether of the Eagle clan or not. The bird is laid on its back and an incision is made down the throat, chest, and belly. The skin is pulled off on each side of this incision, and from the legs and neck, leaving the claws and head attached to the corpse. An incision is made along each wing and the skin removed. The distal joint of the wing is cut, but the tendon joining the wing skeleton to the body is left intact. The corpse is turned over and the skin pulled from the back; the tail feather joint is severed and the tail feathers cut off in a bunch after the animal is completely skinned. Throughout the work, effort is made to remove the skin very carefully without gashing the flesh or drawing blood. The bunch of tail feathers is looped to a cord and hung up to dry. The skin is placed on the ground, feathers underneath, stretched slightly, then pegged down with rocks and left to dry in the sun for a few hours. Hawks are skinned and the corpse disposed of in the same manner as eagles.

Five prayer feathers are made quickly and fastened to the corpse, one to the beak, one to the distal end of each wing, and one to each leg just above the claws. The corpse, together with katsina dolls and bow and arrow, is taken to the eagle cemetery. Prayers are made that the soul of the eagle may fly back to the buttes, there to be born again, and the corpse is tossed into the fissure. If there is a young boy in the house, a downy white feather is tied to his hair "to show the people that the men of the house have just killed an eagle." Later the feathers are pulled from the skin and tied up with yucca fiber into bundles of fifteen.

The skin is thrown away after all the feathers have been removed. These feathers are considered the property of the men of the clan and are kept in the senior clan house. They are freely used by all members of the clan as occasion arises and may be borrowed by men from other clans for ceremonial dress provided they are promptly returned. It may be noted that at Oraibi, according to Voth,¹⁹ the eagle corpse is buried in the ground along with a small plaque, a doll, and a few rolls of blue piki. Y said that in the old days the men of Shipaulovi would throw the body of only a young eagle into a fissure on the mesa edge, thus burying it the way a child's body is disposed of, but the older birds were buried in the middle of a corn field, together with plaque, doll, and piki, with their heads pointing in the direction of the buttes so that their souls would know the direction home. The adult bird was buried in the corn field because "the eagle is the most important animal friend of the Hopi and the old bird is like a grownup person."

The above account shows implicitly that the eagle is a bird highly valued by the Hopi. Prayer offerings are made in many of the major ceremonies for its conservation and increase. When Eagle katsina dance in the village they are given prayer feathers to deposit on katsina shrines to ensure the laying and hatching of eagle eggs during the coming season. Again, at the winter solstice festival, carved and painted wooden representations of eagle eggs, tied with prayer feathers, are placed on eagle shrines close to the village, also to promote the increase of the birds. These customs, together with those relating to the manner in which the birds are hunted, propitiated, and named, indicate that the eagle complex is integrally related not only to social and economic patterns, but also to the religious thought and practice of the Hopi.

TURTLE HUNTING

In this account of the manner in which the Hopi exploit the desert animal life a final note may be added on expeditions made for the purpose of obtaining turtle shells (*yuṅgi'sona*, turtle) to be used as dance rattles. This has not been done for many years, but formerly expeditions would be planned some time before the niman festival in July in order to provide an abundance of rattles for the dancers. Any man might arrange the hunt (*yuṅgi'son'ma'kdo'*), and it would be announced four days ahead by a Badger clansman. Men from other villages would participate. The men would be away from the village for six or seven days.

On arrival at the river *lemo'vaiyi'*, a tributary of the Little Colorado now dammed to provide a water supply for the town of Winslow, each man placed a prayer stick on a shrine in a narrow rock crevice, with prayers for rain and success in the hunting. The men then entered the water. Sometimes they formed a line and waded up the river feeling with hands and feet for the turtles. At other times when the water was high, they had to dive to bring the turtles up from the river bed. As they caught them, they tied them together on a rope. When the collecting was finished the men stood in shallow water and killed the animals

¹⁹ *Idem*, 107-108.

by cutting the skin away from the shell and drawing the body out of the shell by the neck. The body was thrown back into the water in the belief that it would grow a new shell and so be caught again on another occasion. It was important that this work should be done in the water and that no blood or intestines remain on dry land; otherwise the turtle would not be able to renew its shell. The shells were brought back to the village and hung up to dry in the sun, being tested at intervals by flicking with the forefinger to determine the amount of drying advisable to produce the maximum sound. Sheep's hooves were tied to the shells to produce the completed rattle. The Little Colorado tributary was the main source for the supply of turtles. One informant, however, insisted that trips were not infrequently made to the Salt River to hunt turtles, but he could give no details of such long expeditions.

RITUAL IN HUNTING

It may be of interest at this point to summarize the attitudes that underlie the Hopi use of hunting rituals. Among other pueblo groups there is a close association between hunting ritual and ritual connected with war; hunting is usually controlled by special hunting societies or else by the war chief.²⁰ With the Hopi, this is not the case and even where hunting is associated with clan groups, it is with representatives of Badger and Rabbit clans and not with lineages controlling war ceremonial. Hunting ritual, therefore, while drawing generally upon common Hopi ritual patterns, appears to have for its general purpose the stabilization of a definite psychological attitude towards the fauna in such a manner as both to increase the control of the individual over the environment and to conserve and protect the fauna by ritual propitiation.

The Hopi is a skilful hunter and trapper. Tradition and experience teach him the habits and ways of bird and beast; he knows too that success depends in large part upon a well-aimed throwing stick, or upon the ability to shoot an arrow straight and true. Even so, there are times when luck does not come his way, when rabbits are scarce, or eagles nest in inaccessible situations—when, in fact, but for the operation of ritual, the forces that control wild life would render hunting impossible. It is these forces that much of ritual is designed to control or placate and thus to ensure that fortune in the hunt will not be capricious and unpredictable, but regular and uniform. If, in spite of conscientious performance, success is not the result, it is likely that trouble has been caused by delinquencies of personal behavior or evil conduct affecting members of the group, and this must be set right according to approved group standards before ritual can again operate with customary efficiency.

To understand the use of ritual as an aid towards conservation, it may be recalled that the Hopi attitude towards animals, like that of all the Pueblo peoples, is one of respect and esteem. Animals may not be ruthlessly destroyed or wantonly exploited just for the love or excitement of the chase. They must be protected, entreated humbly not to become angry if killed, and urged to give themselves or their young for the use of their human kinsmen. From this viewpoint the phrasing of much ritual becomes clear. The adult eagles are

²⁰ For instance, at Isleta, San Juan, Cochiti, and Sia.

given useful or valuable gifts in exchange for their children and are further placated by kind treatment given to the eaglets in the village when the latter are adopted into the clan, well fed at all times, and given gifts at the niman festival. When death comes special measures are taken that the breath body of the eagle may return to childhood haunts and there live a happy and satisfied life. Similarly with regard to rabbit or antelope. The dead body is respectfully treated and food is sacrificed, that the soul of the animal may be appeased and find no occasion to warn away living companions from the Hopi hunter and his needs. Taken in conjunction with the fact that prayer sticks are placed on shrines or buried in fields during the winter solstice to ensure fertility of all animals, whether wild or domesticated, it is evident that this propitiatory aspect of ritual serves to preserve animal life for continued use by checking evil results that would inevitably follow from uncontrolled carelessness, neglect, ill-treatment, or the operation of obscure other-worldly forces. It has been stated by some students²¹ that Hopi hunting assumes more the character of a religious ritual than an economic enterprise. This is surely incorrect. The quest for food or for objects to be later used in everyday or in ceremonial activities is fundamental. Owing to the prevailing ceremonial phrasing of Hopi culture, generalized ritual patterns of common occurrence in religious ceremonial are inevitably used in another context when it is a matter of improving hunting techniques. The nature of the chase is determined primarily by economic and social values. Ritual, and not specifically religious, patterns are used within this sphere to help secure success and to preserve the fauna of the environment from thoughtless exploitation.

COMPARATIVE NOTES

A few notes may be added in conclusion on the distribution of some typical Hopi patterns of hunting and hunting ritual among other Pueblo peoples and tribal groups in the Southwest.²² Mention has already been made of the control in eastern Pueblos of both deer and rabbit hunting by war captain or hunt society, and the common Pueblo attitude towards wild animal life has been briefly summarized. Correlated with this psychological attitude one finds in the eastern villages that prayer offerings and meal sacrifices are made to deities of the antelope and deer hunt at Zuñi, Cochiti, and Sia. Additional offerings of tobacco, beads, shells and pollen are made at Isleta and Laguna. This attitude is further illustrated at Zuñi, Isleta, Laguna, Cochiti, Jemez, and Sia, where, on return to the village, the kill is placed on a sheepskin, covered with blankets and beads, and sprinkled with meal. It is also specially noted for Zuñi and Navaho that game to be used for ceremonial purposes must be killed without loss of blood, by smothering. Probably this custom is widespread among all the eastern villages. The chute and pound method of hunting larger game, or variations of this, together with the use of the head and horns of deer as a stalking disguise, are employed by the Basin Plateau peoples, Zuñi, Navaho, and Apache. At Santa Clara, Cochiti, and Sia

²¹ Notably Hough, *op. cit.*, 285-86.

²² See bibliography for references to literature. Spier, *Havasupai*, 120-21, should be consulted for the more detailed distribution of some of these patterns.

the favored method is a communal gathering in which two wings of hunters fan out to enclose the game.

Communal rabbit hunts for men alone, or for mixed groups of men and women, either of the straight course, circular, or two-wing type, and characteristic of nearly all southwestern peoples, are reported, for instance, from San Juan, San Felipe, Jemez, Sia, Zuñi, Acoma, Isleta, Cochiti, Navaho, Havasupai, and the Basin Plateau. Hunts held in connection with calendrical ceremonials, or for chiefs or priests, are also a common Pueblo pattern. Ritual fire-making by the hunt chief, together with the sacrifice of meal, food and offering of prayer plumes, is common to all Pueblos. Ritual employing the fire alone occurs among the Paviotso and Shivwits of the Plateau. The curved rabbit stick is known but little used at Isleta and is commonly employed as a hunting weapon by the Zuñi, Navaho, and southern California tribes. The straight throwing stick is used at San Juan, Jemez, Sia, Acoma, and Cochiti, and the custom of ritually passing the weapon through the smoke of the hunt fire is noted at Sia and Zuñi. At Zuñi, Acoma, Laguna, San Felipe, and Jemez, rabbits brought back to the village are sprinkled or touched with meal and propitiatory prayers are offered to ensure that the soul of the animal is appeased.

Eagle hunting is widespread throughout the Southwest and adjacent areas. Clan ownership of nesting places is the rule with southern California groups. The pit trapping technique, together with a bait of deer or rabbit meat, or else a dummy rabbit bait, is employed by Uintah Utes, Navaho, Jemez, and Taos, with a distribution north and east over the Plains. Capturing eagles in the nest is the pattern at Zuñi, Santo Domingo, Santa Ana, San Felipe, Sia, Cochiti. It is also reported for Comanche, Havasupai, southern California tribes like the Cahuilla, and Diegueño, for the Yokuts, and as far north as the Thompson River peoples. Shooting the birds with bow and arrow is favored at Isleta and recalls the similar method used by Caddo and Cherokee to the east. For all these groups, of course, the ceremonial context associated with the eagle hunt follows the characteristic ritual phrasings of the peoples and cultures in question. When captured, the birds are caged in village or camp by Zuñi, Havasupai, and California tribes. At Jemez, two birds only are kept in cages, the rest being killed immediately the men return from the hunt. The captive birds are plucked and eventually freed by Navaho, Yokuts, and Thompson River Indians, but the common pattern in the Pueblos and in southern California is to kill the birds ritually without loss of blood by pressure on the breast; among the last named this is done in connection with the annual mourning ceremonies.

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- M·AAA Memoirs, American Anthropological Association
- AP·AMNH Anthropological Papers, American Museum of Natural History
- R·BAE Report, Bureau of American Ethnology

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NAVAHO WARFARE

TYPES OF WARFARE

WARFARE as a living branch of Navaho culture existed until about 1870. Though few Navaho are alive today who have engaged in this activity, some of the older men are familiar with its various phases. This paper is concerned with a description of the formalized pattern of warfare and its relation to the Squaw or War Dance and the *nac'it*.¹

A traditional enmity existed between the Navaho and the Pueblos and Apache; in later times the Ute and Comanche, Mexicans and Americans came to supplant these two groups. Tradition also accounts for the causes of these hostilities. The most popular tale concerns the peoples of Canyons del Muerto and de Chelly.

Long before [we were taken to] Fort Sumner,² the people on both sides of the Lukachukai Mountains were very prosperous, while those in del Muerto and de Chelly were poor. However, the people of the Canyons were noted for their beautiful women. The men who had horses would sneak into the Canyons and steal one or two wives from these people. The reason for this stealing was that the people of del Muerto and de Chelly were originally of Pueblo stock while those in the mountains were of the old Navaho stock and the Canyon girls were much prettier than those of the mountains. For revenge, the Canyon people would raid. First they raided the Pueblos, then the Ute, and finally the Mexicans. This drew attention to the Navaho, and raids in retaliation were sent into the Navaho country. As the Canyon people were safe in their protected location, the Navaho on the outside were forced to suffer under these attacks.

This belief that the people of del Muerto and de Chelly were responsible for bringing enemies into the country is widespread among the Navaho. They are popularly designated as "the thieves" and during large social gatherings, if something is stolen, it is a standing joke to say, "There must be some people from the Canyon here."

Another current story explains the beginning of hostilities between the Navaho and Hopi.

When the Navaho were hungry they went to the Hopi country. The Hopi would treat them well and feed them. When the Navaho had been fed the Hopi would throw them off the mesa. In revenge the Navaho would organize a war party. After the attack they would go home, and the Hopi would prepare a return attack in the Navaho country. Then each people would consider themselves satisfied and a treaty would be made which would last until some one was thrown over the mesa, or until a Navaho killed a Hopi in the cornfields. The Navaho were usually the ones who broke the treaties.

The Navaho say that about 1840 real hostilities first began with the Mexicans of the upper Rio Grande valley.

¹ The material here presented was gathered during the summer of 1933, on a field trip under the auspices of Yale University. The informants from whom the information was obtained were Curley of Chin Lee, Arizona; Roan Horse of Crystal, Arizona; and The Son of the Late Smith of Fort Defiance, Arizona.

² The Navaho were held prisoners at Fort Sumner, New Mexico from 1863 to 1868.

In the old days the Mexicans possessed a great number of things which the Navaho desired, such as hoes, dyes, blankets, and dry goods. The Navaho exchanged horses for these at San Fidel. They were friendly until some of the Navaho learned Spanish and prevailed on the Mexicans to raid the Navaho for horses. The Mexicans were defeated in the raid and that began the trouble. When treaties were made, the people of de Chelly and del Muerto would attack and that would cause more trouble.

The Navaho appear to have been the military superiors of the Mexicans until the latter allied themselves with the Ute. The Ute were generally successful against the Navaho and with the aid of the Mexicans and later the Americans, during the campaign of Kit Carson, made life so uncomfortable for the Navaho that just prior to 1865 a large body of Navaho moved westward and for the first time came in contact with the Havasupai.³

During their sojourn at Fort Sumner, the Navaho first came into military contact with the Comanche. Although under United States surveillance the Navaho raided the Comanche country. In retaliation the Comanche attacked the Navaho twice at Fort Sumner and once after their return to the reservation.

In general, the Navaho attitude toward warfare appears to have been one of disapproval. In spite of the rationalizations given to justify an attack, it was clearly understood that the desire for plunder was the motivating force. The majority were opposed to these expeditions and the local headmen did all in their power to suppress them. "These warriors thought they had the ritual power to defeat anyone and would not listen to the older men; that is why the Navaho were ruined at the time of Fort Sumner."

Two types of offensive warfare were engaged in, the raid and the reprisal. In the raid, the objective was not to fight but to steal livestock and to plunder. A war party of this type usually consisted of four to ten men. The revenge type of engagement represented a more concerted effort and included a force of from thirty to two hundred men. Neither constituted warfare in a tribal sense. The people involved were always members of a single locality or at most of a district. While the ritual background of both types of warfare were the same, the actual practical procedure differed somewhat. The two following accounts, one of a raid on the Comanche about 1866, the other a description of an attack on Oraibi about 1850, will serve to show this difference.

A raid on the Comanche. From Fort Sumner my stepfather went to the region of the "Red Water" [Red River?] to raid the Comanche, who were living in tipis along the river. These raiders sneaked around the camp and all they could hear was the barking of the little puppies. They investigated and saw that the Comanche had watchers among the horses. Then some of the Navaho went back toward the tipis and saw a great number of horses tied to a line. They hid until almost daylight. Then the watchmen left and the Navaho roped the loose horses, mounted them, and started driving horses across the river. Just as everyone was mounted, the Comanche discovered the Navaho and gave a signal by tapping on a drum. You should have heard the noise in the Co-

³ This agrees with Spier's information; see Leslie Spier, *Havasupai Ethnography* (Anthropological Papers, American Museum of Natural History, vol. 29, pt. 3, 1928), 95.

manche's camp: coyotes, screech owls, and every other kind of noise was made! The Comanche chased the Navaho all that day and night. You could hear the bullets whistling overhead. One man rode ahead to lead the horses; the rest drove the horses after him. After a while half the horses turned back and the Navaho let them go. One man had roped a horse, around whose neck were tied eagle, mountain lion, bear, and owl claws. This horse had some bundles with plumes stuck in them tied in the hair of its tail. This horse must have been a warrior's horse. (They gave these bundles to some old warrior at home.) Finally the Comanche gave up the chase. When the horses became exhausted they were shot. Every so often, until after the third day, some one would be sent back to spy, and he would report that the enemy was still following. They rode and drove the horses for three days and two nights without food. The Navaho were so exhausted that they sent some of the party ahead to build a fire and when the herd arrived one of the horses was shot and eaten. By the fourth day some of the men were so sleepy that they fell off their horses; others slept on the saddle. By this time the enemy had given up the pursuit, so the Navaho slept in shifts; one section of the party driving the horses while the rest slept. On the fifth day they arrived at Fort Sumner. By that time only a few of the strongest horses were left. They took a zigzag route home. That is why it took so long. It was a very risky thing they practiced. They went on foot, only taking what food they could carry. Their food might have run out, and there they would have been—lost in a strange country. They did not even know where to find water and had to consult "stargazers" and "hand tremblers." When they ran out of food they simply tightened their belts. Another thing that happened to raiding parties was that when driving livestock across big flats they saw mirages and were frightened. They would run off and leave great numbers of livestock behind. Sometimes they saw mirages on both sides and did not know what to do.

An attack on Oraibi. Some Navaho were killed by the Oraibi people in an underhanded way. This news spread into the Navaho country, and the Navaho said, "Let us get up a war party and lick those Oraibi." This party had several hundred men in it. They came from the district of the Lukachukai Mountains. They moved up to within a day's trip of Oraibi. That night they were forbidden to build a fire. One of the men in the party could talk Ute fairly well. He walked back and forth all night. The Oraibi were great friends of the Ute and when their spies heard this man talking Ute they went back and said, "It is just the Ute who are coming to trade." However, during the night the Oraibi became suspicious and prepared themselves. The next morning when the Navaho got within two or three miles of the village, they could see a party of men coming down the mesa; all were dressed in white. Every Oraibi warrior had a buckskin tied over his left and under his right shoulder. The Navaho vanguard rode up, made a circle and led the Oraibi away from the village. The Oraibi followed these men back to the main body of Navaho. One Oraibi had an arrow feathered with the feathers of the "Monster Eagle." He attempted to shoot this arrow over the whole group of Navaho but failed. If he had succeeded the Oraibi would have been victorious.

There was a young woman among the Navaho. She was on a very fast horse and rode right into the center of the Oraibi. She called to the Navaho to come on and give all they had. The Navaho encircled the Oraibi and started to slaughter them. They chased those who broke through up to the base of the mesa. There were dead Hopi lying about for over two miles. What was left of the Oraibi ran for their houses. Then the Navaho turned the stock loose and started to drive them off. Next, they went into the village and took everything they could find. One of the Navaho warriors was named Buffalo Tooth. He began to climb a ladder and an Oraibi took aim at him. Just then Buffalo Tooth looked up and had one of his teeth shot out. Another Navaho was wounded in the

arm; another in the finger. Both were hurt as they were crawling through windows. The leader then called off the Navaho party. He said that they had done enough damage and that they had better leave. They gathered up the plunder, took the buckskins off the dead Oraibi, and scalped them. They took some of the pottery and broke the remainder. When they were leaving, the few surviving Oraibi came out on their house tops, and you should have heard them wail. The buckskins which were taken from the Oraibi were the ones which were made into the fringed shoulder straps which are worn by the patients in the War Dance. These are still in use today. When the Navaho were six miles from the village they drew a line back of them. That was a mark over which no enemy could pass.

When they returned home with the plunder, they were serenaded in front of the hogans. The warriors threw out to the serenaders the sheep and the plunder they had secured. The singers never bothered to skin these sheep; they simply cut them up and roasted them. If any Navaho warrior was killed in battle this serenade was not permitted.

Defensive warfare was poorly developed. If an attack was made on the Navaho, every one fought for himself. In some instances the men ran for the brush and allowed their families to perish. However, quite often two friends, or two relatives (usually uncle and nephew), would fight together. If one was killed the other would refuse to leave and if necessary, would die fighting. No ceremony held these pairs together.

No type of fortification was employed. However, watchers were commonly placed at advantageous points. These men lit signal fires and warned the people in the valleys of the approach of the enemy.

The foregoing accounts give some idea of the difference in the practical procedure of war. There remains to be described the war ritual, which to the native mind was the most important part of any military undertaking.

The Navaho believed that the enemy and the country of the enemy was potentially maleficent. In order to protect themselves from this and in order to insure the success of the party, a great amount of ritual was performed during the course of any offensive movement. These war rituals were similar in pattern to those used in hunting, on trading expeditions, and on trips to the lakes south of Zuñi to procure salt. Like the Ways of hunting, there were several Ways of going to war. The three most important of these were the Monster Slayer Way, the Enemy Way, and the Yei Hastin Way. These three Ways necessitated a large body of men in the attacking party, and while differing very little from other Ways of going to war, were used almost entirely in the reprisal type of offensive warfare. According to mythology the Monster Slayer Way originated first. The Enemy Way then came into being, and finally a number of Ways patterned after these first two. The ritual Ways used in raiding were the Blessing Way, the Bear Way, the Big Snake Way, the Turtle Way, and the Frog Way. Aside from the size of the parties, the primary differences lay in the songs and prayers which the party sang and said.

WAR PARTIES

Formation and personnel. The formation of a war party was in the hands of a shaman-leader, who knew the songs, prayers and observances of one of the several Ways of going to

war. In payment for his ritual service such a man received a larger share of the plunder. Before going into the fight, the leader was privileged to describe a particular piece of property or the color of a horse, etc., and if such an article or animal was found in the loot it belonged to the leader no matter who had captured it. This did not apply in the case of prisoners who always belonged to the one who captured them.

Such an individual who had confidence in the power of his ritual to defeat the enemy, would go among his able-bodied friends and relatives (growing boys and girls were excluded) and ask for volunteers to accompany him to war. For a raid, four to ten men were needed; for a reprisal thirty to two hundred. Generally the leader was the only man of the party who knew the complete ritual of the Way of war under which they would fight. However, men who knew other Ways were not excluded and were allowed to sing the songs and say the prayers of their Ways. The man who organized the party was in complete command of all its members.

All of the able-bodied population were potential warriors. The training of children for war and for the general hardships of life began at the age of seven or eight. Boys were awakened early in the morning by their fathers or maternal uncles who said, "Wake up, be lively! If you are not up early, the enemy will come and kill you while you sleep." They were forced to take long runs, roll in the snow, and dive into icy water. As they grew older they took runs at noon when the sun was hot. At a still later age they were given purgatives and emetics, followed by sweat baths. Boys were told that if they did not do this "the first thing that came along would kill them because their systems were filled with ugly things that they should have gotten rid of: they would be quick tempered, have weak minds, be unable to stand life's hardships and therefore disgrace their families." Apart from this ordinary discipline, at irregular intervals the old men gathered the boys together and instructed them in shooting, the use of the shield, how to give the least possible target to the enemy, how to take advantage of natural cover, etc. The old men said to the boys, "If you train right you will be killed by an arrow in the chest and die like a man. It is not a disgrace to die defending yourself. Otherwise some weak enemy will kill you with an arrow in the back and you will disgrace your people."⁴ If a boy trained properly, by the time he was seventeen to twenty he was allowed to join a war party.

A boy joining a war party for the first time was under special restrictions. He was not allowed to eat anything hot because it was thought that if he did, it would ruin his teeth. He was forbidden to sleep on his stomach or back. He must not look at things that were in the distance—only things that were close about him—or he would be killed in the fight. When the evening camp was made, his place was back of it in the direction of his own home. After he had been in a battle these restrictions were removed.

On the first evening of the journey a pipe was lit and passed clockwise. Everyone smoked, including the boy. It was on this occasion that a boy first smoked and the act symbolized his status as a warrior.

⁴ Cowards were called crows "because the crow is afraid of every little thing." A man who was cowardly would be ridiculed in public.

If the boy killed an enemy during the course of the fight, a leader of the Enemy Way took the scalp for him. The boy was given the scalp to chew. This gave him the status of a full-fledged warrior and thereafter he could take his own scalps.

If a boy or man desired to become a war leader, he sought out a shaman-leader of the Way that he desired to learn and asked for instruction. The power and instruction necessary to become a war leader could be taught or given to anyone who was willing to accept it. The novice learned the ordinary arts of war at home but to the Navaho mind the most important things were given him by his tutor. The boy left home with his instructor and went into the country of the enemy. There a sweat house was built and the instructor taught him "the most important things pertaining to war, the secret names of the enemy, and the songs and prayers which were used before making an attack." The pupil and instructor stayed out for four days. The warrior told the pupil that he had taught him everything and that he had been strengthened by the secret names, songs, and prayer, and that he was now a warrior. While most of this instruction could be given on the warpath, it could not be given at home as it was believed that it would cause death in the family or among the relatives, bring on an epidemic, or an attack from the enemy.

A woman, if she wished, might join a war party. There were never more than two women in a party. They fought just as did the men. However, they were forbidden to take scalps and must not have sexual intercourse with any members of the party. None of the informants had ever heard of a woman leading a war party.

Curing shamans were never taken on a war party to care for the injured "because no warrior ever thought that he would get hurt!" However, if one happened to be with the party, his services were used if needed.

Preparations and equipment. When the leader had acquired the requisite number of volunteers, a meeting place was agreed upon and the time for departure set. The meeting place was usually in the enemy's country. The time interval between the formation of the party and its departure was always an uneven number of days, generally three or five. There were several ways of keeping track of the time. Knots were tied in a string and one untied each morning; when the last was untied, the party left. In other instances each man took the same number of pebbles, twigs, or corn kernels and threw one away each day until all were gone; or cut a notch in a stick each day until the right number was totaled.

This three or five day period was one of purification and preparation. Sexual intercourse was tabu and the warriors spent a great deal of time in the sweat house purifying themselves, singing songs, and saying prayers for protection and success. These songs and prayers were said to have been taught to the Navaho by the Monster Slayer. Each warrior made offerings of "jewels" and pollen to the Sun People and the Wind People, asking for protection in the war in which he was about to take part.

Rations were assembled, and general equipment and weapons were made or repaired. Only a limited supply of food was taken because the warriors said, "We will have plenty to eat where we are going." The food usually consisted of a few handfuls of dried yucca



Navaho warrior: Keams Canyon, Arizona, 1893. (Photograph by courtesy of the Smithsonian Institution.)

fruit, dried grass seed, and jerked venison which had been chopped up, shredded, and mixed with tallow. This was carried in the pouch which each man wore.

All the equipment and weapons used by the war party were made under ritual conditions and were "blessed" before the party left. When the equipment or the materials for making it had been assembled, the warriors gathered at an appointed place. The leader directed the work, and with the men, sang songs which were believed to impart invulnerability. This meeting was open only to warriors, especially were women and children excluded, as it was thought that the songs which were sung would cause them harm.

Each man supplied himself with an awl, sinew, soles, and uppers for making moccasins should the pair he wore wear out during the trip. An extra shirt and pair of pants was also carried.

A warrior always chose the thickest buckskin he could obtain for making a war shirt. Some of the wealthier men had especially made armor of four thicknesses of buckskin. These shirts had sleeves which reached almost to the elbow. They fitted tightly around the neck and were laced across the chest with a series of thongs. In making them, one buckskin was first laid flat and cut to pattern. On this was rubbed the leaves of the "wide cactus," which left a sticky substance. Next, the cuttings and trimmings of the buckskin were put on and held in position by the secretion from the cactus. This process was repeated until the four layers were in place; then the shirt was quilted to insure its keeping its shape. This armor was quite heavy and was worn only during an attack.

Another type of armor was made of eight buckskins. It was constructed in the same manner as the first but reached down to the knees. Because of its weight, it could be worn only on horse back and was slit at the bottom both in front and behind, in order that the horse might be straddled.

Several kinds of caps were worn. These did not differ from those used on everyday occasions, except that just before the attack was made, a special plume was attached. "This protected the wearer just like the badge of Saint Christopher." The simplest type were made from the skin of the heads of badgers, wildcats, skunks, and mountain lions. The wet hide was stretched, placed over the head, and fitted. Bark or wool was then put in it so that it would hold its shape while drying. When dry, a chin strap was attached and the feathers of eagles and owls were put on top, abalone and white shell in front. Another type of cap was made of two thicknesses of buckskin. It was secured by a chin strap and had a thong at the top to which were tied the tail feathers of eagles and owls. A section of abalone shell was attached over the forehead.

The warriors arranged their hair in the ordinary way but it was carefully done and tied securely with a thong to keep it in place and from getting tangled during the trip.

Each warrior wore an amulet to protect him and give him strength and power. The amulets were of two kinds. One was a wristlet made of the claws of bears, mountain lions, eagles, and owls. This gave the warrior strength and power. The other was a bundle which contained bear pollen ("pollen which was placed on a live cub bear and then shaken off"),

big snake pollen ("pollen from the chief snake that lives in a den and never comes out"), thunder pollen ("pollen which was shaken off the thunder"), cyclone dirt ("a pinch of mud formed by the melting hail which falls during a cyclone"), and a plume taken from a live eagle. This bundle was believed to protect the warrior.

The weapons used were the bow and arrow, lance, club, and shield. The bows were the same as those used in hunting. However, before going to war, each man renewed the sinew-backing and equipped his bow with a new bowstring.

Each warrior carried about fifty arrows in his quiver. These were ordinary hunting arrows but were treated with a preparation believed to make them poisonous. This poison was of three kinds. One kind consisted of black paint which was mixed with rattlesnake blood, or the stingers of ants, bees, or other insects. "A man who was scratched with one of these poison points would get an infection immediately and die." In preparing the second type, a rattlesnake was caught and killed on a rock. Next a yucca leaf was heated over the fire and the juice squeezed out on the blood of the snake. Finally charcoal made from the leaf pith of the "wide cactus" was added to these. The third kind consisted of the juice of a yucca leaf and charcoal from a lightning struck tree. The arrows were painted from the point to about six inches back up the shaft with one of these three "poisons." Beside this, a medicine bundle attached to the quiver was thought to give the arrows added power.

The lance was generally employed by mounted warriors but could also be used on foot. The Navaho are not in agreement as to when it first came into use. Some said it was very ancient, others that it dates from the Spanish introduction of iron, and still others that it was taken over from the Comanche while the Navaho were at Fort Sumner.

The lances were made in two pieces. The head was of hard wood worked down to a fine point and polished on a rock. Its length was from eight to ten inches and its width three inches at the widest part. "The diameter must not be too great or it will be too hard to pull out." After iron was introduced, points of that material were used. These were about the same length as the wooden points and in cross section formed an obtuse angled triangle. The handles were from three to six feet long. They were made of willow hardened by pounding with a stone, or of oak. One end of the handle was split, the point inserted, and secured with a buckskin wrapping. A piece of wet buckskin was then sewed around the juncture and allowed to dry in place. The spear points were painted black and "poisoned" as were the arrows. The handles were painted various colors. Two eagle feathers were attached at the juncture of the handle and the point. At the butt of the handle, a flint arrow point was tied. This was believed to give the spear added power. The warrior attached the spear to his wrist with a buckskin strap in order that he might be free to shoot and still have the spear ready in case of need. The blow was usually struck with an overhand motion, though occasionally an underhand blow with a short shoving swing was practiced.

Clubs were used by some of the warriors. There were two kinds. The older type consisted of a grooved stone, which was hafted by twisting a small branch from an oak twice

around the grooved section of the stone, and tying the free ends together in several places. This formed the handle. With the introduction of cattle the second type came into use. The flesh and bone from the upper end of a cow's tail were removed and a stone put in their place. The opening was sewed up and the hide allowed to dry over the stone. When the tail was cut off at the desired length, the club was ready for use. This second type of club is identical with that used by the Apache. No wooden clubs were used.

Shields were made of buckskin, later of rawhide or horsehide. The skin from the hip of the animal was always used. Occasionally they were made of two thicknesses of hide. Sand was heated and arranged in the form of a knoll about the size of an ant hill. The hide was soaked until soft, pegged down over the knoll, and allowed to harden and dry in that shape. "When dry it was about the size and shape of an ordinary food basket" (diameter about eighteen inches). The shield might be finished in three ways. Some men simply bored two holes at opposite sides and tied a thong through them by which the shield could be carried on the arm. Eagle feathers were sewn around the edge with sinew. "These will protect you from the enemy and help you kill other Indians." According to the Franciscan Fathers,⁵ to preserve these feathers, many of the shields were provided with a crease down the center so that they might be quickly opened and closed by stepping on them. In the second type of finish, the edge of the shield was laced with buckskin to strengthen it and eagle feathers were added with the lacing. In the third type a tree branch was cut the size of the circumference and laced to the shield. Cross pieces were added and a buckskin loop affixed to these by which the shield was held on the arm. A pinch of Rio Grande Ground Squirrel (?) pollen (pollen placed on the live animal and shaken from it) was tied to each shield. This was thought to make the wearer invisible to the enemy. Next the shield was painted black. Upon this background was painted in white, a pair of bear's feet, hands, the big snake, lion, the sun, the moon, the half moon, zigzag lightening, the rainbow, crescent, and Slayer of Monsters. According to some informants, these drawings represented the Way in which a man went to war. According to others they were put on the shields because "they were powerful and feared, and because they strengthened the warrior." Paintings of this type were also put on the moccasins. While the painting was being done, the leader held a special Blessing Singing.

The warriors trained themselves in the use of the shield. It was said that a well trained man could deflect arrows and even the old style bullets. The shield was fastened around the center of the left forearm. In this position it could be used for defense and still leave the hand free for shooting.

Horses used in warfare were specially trained. A fast horse was selected, taught to turn and stop quickly, and to dodge. When this had been accomplished a blanket was hung up and the horse made to run toward and over it so that it would run down a man who was on foot. Sham battles were also engaged in to accustom the horse to field maneuvers. Two men in war regalia and on trained horses would attack the man on the untrained horse. Clay

⁵ Franciscan Fathers. *An Ethnologic Dictionary of the Navaho Language* (St. Michaels, Arizona, 1910), 317.

balls and horse dung were used as missils. The men practiced riding on the side of the horse so as to afford no target to the enemy. Horses were also taught to ignore the sound of guns.

When the party was ready to charge each man talked to his horse. They would say, "Be lively; you and I are going into a dangerous business, my horse. Be brave when you go to war and nothing will happen; we will come back safely."

The departure and journey. When all the preparations were completed and the day for departure arrived, the warrior bid goodbye to his family. "He gathered his children around him and talked to them. He said, 'I do not know whether I will ever come home.' " Next he spit in his wife's hand and put pollen in it. This saliva and pollen were wrapped in a bundle and held by his wife while she prayed for his safe return.

The first day was usually spent in leave taking and the journey to the appointed meeting place. When all had arrived, a windbreak was built.⁶ The entrance of this brush circle was toward the east and the growing tips of all the boughs used in its construction pointed in that direction. When this was finished, a fire was built and food cooked and eaten. Then the ritual of the evening commenced.

The leader first sang his songs and said his prayers. All the songs and prayers asked for the success of his own party and the defeat of the enemy. Sheep and cattle were asked for and also wind and snow that the tracks of the party might be obliterated. When the leader had finished his singing, anyone in the party who wished could sing songs of his own. After all who wished to had availed themselves of this opportunity, the leader instructed them as to their conduct. He told them that throughout the course of the trip all members of the party must keep a serious mien and that any joking or levity would bring ill fortune. They were also told that they must keep from thinking of their relatives or of anything connected with their homes, and concentrate on the business ahead.

Other instructions were concerned with the conversation of the party. "The purpose of the party was to bring something back so all the talks were about such things." When the warriors entered the enemy's territory, the leader told the men to use certain words other than the usual ones for the animals and objects that they hoped to obtain. This was called "war talk" and "not talking plainly." The Navaho never practiced this "war talk" in their own territory because it was believed if they did that an attack from the enemy would follow. This restriction lasted from one to three days of the journey. When the leader decided that the appropriate time had arrived, the party lined up in a row facing the enemy's country. At the coming of dawn, the leader began a song in which the rest joined. At a certain part of the song all turned toward their own homes and the tabu against "not talking plainly" was removed.

The leader told the men not to urinate in the brush. He also warned them that should they become separated and wish to communicate with each other, they were to use pre-arranged calls such as those of the coyote, wolf, whip-poor-will, or screech owl.

When the leader had finished his instructions, two men were chosen to "listen." Those

⁶ On a raid no shelter was erected; the men simply selected a protected site and slept there.

selected were men who had practiced this profession, knew the prayer for listening, and were known to be trustworthy. The leader took wax from the ears of a coyote and badger and rubbed it on the ears of the "listeners" and under their eyes. This was thought to make their hearing acute and assist them in getting a vision. These men left the camp and went about a hundred yards toward the country of the enemy to "listen." If they heard the sound of horses or sheep, the trotting of animals, or got visions of horses or sheep, it was considered a good omen. Contrarily, if they heard the cry of a crow, screech owl, hoot owl, wolf, coyote, or any other "man eating" bird or animal; heard the footsteps or conversation of the enemy, or heard some one shout as if he were hurt (this was believed to predict the death of one of the members of the party), these were considered bad omens and the party would turn back. Occasionally the "listeners" were unsuccessful. This was thought to be due to the fact that there were unbelievers in the party. Listening usually took place only once during the trip but not necessarily on the first night out.

Divining the future of war parties was also done by "stargazers" and "hand tremblers." The "stargazers" fixed their eyes on a star until they received a vision and the "hand tremblers" foretold the future by reading the motions of their hands.⁷ However, the "listeners" were considered the most reliable source of information. "Some of these men would say 'There are a lot of horses at such and such a place.' Some of these predictions came true; others did not."

When the predictions had been obtained, the party prepared to sleep and sentinels were posted for the first half of the night. As on hunting trips, if a man dreamt of killing, being chased, or being defeated, it was considered a good omen, though under ordinary circumstances, to dream of such subjects was considered a prediction of disaster for the individual or his family. However, if a man dreamt of being killed it was considered a bad omen unless on the same day the party came upon cattle or horses which they could kill. "The animals took the place of the man in death." Another good omen was a dream of horses, sheep, or cattle.

In the morning, when the party was ready to leave, the leader instructed the men to spit on their bowstrings and rub them. Then they were told to rub their legs and bodies with their hands and do the same with their arrows. "The leader tells them that their bows and arrows are like humans. That they have a mind: that if the warrior is a coward his bow and arrow will be cowardly. The spitting and the rubbing strengthened both the man and the weapons."

As the party left camp, the leader began a song and a volunteer stepped forward, took the leader's quiver, and led the way for him. The leader was not allowed to look about because if he should see something unlucky it would mean defeat. This volunteer informed the leader of all that occurred around him. He must not step over coyote dung, nor walk

⁷ See William Morgan. *Navaho Treatment of Sickness: Diagnosticians* (American Anthropologist, vol. 33: 390-402, 1931), and W. W. Hill. *The Hand Trembling Ceremony of the Navaho* (El Palacio, vol. 38: 65-68, 1935) for further information on these forms of prediction.

into anything that would prick or scratch him and draw blood, else bad luck would ensue. This man held his office until the charge was made. Then he returned the quiver to the leader who took command.

The party proceeded with great care. Spies were sent ahead of the main detachment to ascertain if the enemy were about. If objects were seen in the distance these men investigated and reported before the party moved on. Whenever possible, the warriors walked on hard ground, rocks, or bushes in order to leave no tracks. If this could not be done each man walked directly in the footsteps of the man before him.

If a coyote should cross the path of the party it was believed to foretell bad luck. The warriors in this case either turned back or made an offering to avert the danger. "While at Fort Sumner the Navaho went on a raid in the Comanche country. One night, while they were asleep, a coyote walked into camp. Although they offered prayers and made jewel deposits, the bad luck still held. Four of the party were killed; and the rest, who scattered, were lucky to get home alive."

The attack. The ceremonies and observances of the evening and morning of the first day were repeated on each day following until the morning of the attack. At dawn, the morning of the attack, the leader put on a pair of moccasins with the big snake painted on the soles, tied his good luck amulet to his cap, and went a short distance from the camp. Here he called the enemy by their secret names, sang songs, and said prayers. "The prayers are like this: he starts with the enemy's head and mentions all the different parts of his body right down to the ground, and ends his prayer in the ground. This is just the same as burying the man." When he had finished this esoteric ritual, the leader returned and reported to the party how he had performed the ceremony and whether he had hesitated or made mistakes in the songs or prayers or had performed them perfectly. If he had made mistakes the party would usually turn back. The leader, in spite of the mistakes, might insist upon fighting but he could not overrule the men who wished to go home. "It has happened many times that bad luck has followed a mistake; the leader being killed or seriously injured. If the war chief has sung his songs and said his prayers perfectly there is no danger in making the attack and everyone knows and feels that they will be lucky."

The warriors prepared themselves for the attack by painting on their bodies snakes, bear tracks, or human hands in red ochre, white clay, blue paint, or charcoal. The snakes were believed to give the man power and make him feared as the snake was feared, and the bear tracks to make him fierce and brave like the bear. The hands were thought to symbolize a five fingered being, namely "a man." Some of the warriors also put on moccasins which had snakes drawn on their soles. These were used only in war.

The attack generally took place just at dawn, attempting to catch the enemy by surprise. The leader threw arrows into the air: when they could be plainly seen it was judged that the time was right to charge. "Each warrior would talk to his bow and arrow as if it were a person, saying 'I want to defeat the enemy; I want to be victorious.' " The leader then instructed the party to be careful not to shoot each other, and the party charged, shouting, "ahu! ahu!"

When the fight began no restrictions were observed and each man fought as he wished. Except when attacking the Pueblos, the general procedure was to break into the houses and kill the adult men and women and the babies. The younger girls and boys who were able to travel with the party were taken captive. "Of course some warriors were more soft hearted and spared some of the people. Some of the people also escaped."

If the fight was with the Pueblos, the Navaho surprised the workers in the cornfields, killed and scalped them. Then they went toward the village, showed the scalps and taunted the inhabitants, asking them to come and fight. They seldom entered the village proper. Usually the Pueblo people would make a counter attack and a running fight took place. "The Pueblos were good runners and could catch the Navaho even if they were on horse." After this the Navaho went home, taking what plunder and captives they had obtained.

Different warriors had individual ways of fighting. One war leader, noted for his prowess, always rode through the ranks of his opponents, stabbed a man with his lance, turned, rode back again and stabbed another man. "When he got back you could see the arrows hanging from his buckskin armor."

Other individual peculiarities in fighting were conditioned by happenings that had taken place in previous battles. It was customary for one warrior to give another a name referring to some circumstance of the fight and say, "Let that be your habit." The warrior thus commanded was compelled to fight that way in the future. For example, if the Navaho attacked while the enemy were eating, and defeated them, one warrior would say to another, "Why don't you do that? If you are eating, pay no attention to an attack that is being made until some one tells you to start fighting." "After that, such men would do things that way." Others had to be handed their quivers or called by name and told to fight before they would take part in the battle.

These "habits" were not confined to fighting.

One old man had a habit that he acquired on a raiding party. Two Mexican sheep herders were killed while they were butchering a sheep. Everyone grabbed for the meat and received some, except Old White Hair. All he obtained was a bowl of blood. One of the party said, "Now in the future you shall have this habit. If you are asked to receive the stick in the War Dance always ask the person who wishes you to receive it if he will give you a bowl of blood. If he says no, do not accept the stick; if he says yes, accept it." The old man always did this.

After the fight scalps were taken from both men and women enemies. There was no particular way in which the scalp was taken; some merely took a small piece of skin, while others took the whole scalp with the ears attached. Most informants agreed that anyone, except a woman or a boy on his first trip, could take a scalp. However, two informants stated that scalps could be taken only by the leader or by a chanter who knew the proper ritual. Other trophies taken included the achilles tendons and the tendons from the neck of any slain war leader or chief of the enemy. These were placed in the war bundle of the party leader. Also, if a pregnant woman was killed the foetus was removed and parts of it saved. These parts were necessary to complete the war bundle of a leader in the Enemy Way.

The Navaho never burned the villages they raided. They were only interested in plunder and captives. The prisoners were never tortured or mistreated. If, when a warrior took a captive, he addressed him by the proper kinship term (namely, adopted him as one of his family) that prisoner was recognized as one of the tribe and no distinctions were made between him and other Navaho. However, if the adoption did not take place immediately, the status of the captive was that of a slave. Some slaves, because of their accomplishments, were more highly thought of than others. If the captor was well-to-do he kept his prisoners; otherwise he sold them to some rich man. The price of a slave was a set of beads, a mountain lion skin, and "a few other things."

When the scalping and plundering was finished, the Navaho buried their dead. As the party had no facilities for digging graves, the bodies were placed in caves, under rocks, or in crevices. There was no mourning ceremony for a dead warrior, but his friends agreed among themselves to avenge his death.

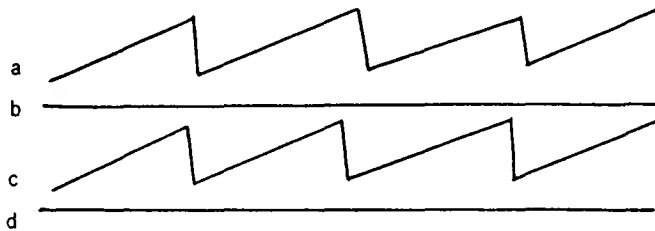


FIG. 1. Protective drawing made on retreat.

When the dead were disposed of, the warriors gathered their plunder and captives and prepared to leave before the escaped enemy could organize a counter attack. Quite often such a counter attack was made and a running fight ensued; this lasted until nightfall. Warriors killed in such a fight were left where they fell. The wounded were carried along as well as possible, their comrades singing over them as they went. When a wounded man arrived home, there was further singing over him. Then a curing ceremony was held for his benefit. This might last for a week or be prolonged for ten days or a month. This ceremony was the same as that performed for any injured person.

If the party had been successful in the attack and had taken a large number of captives and quantity of plunder, when they left the scene of the battle the leader drew four lines (fig. 1.) behind them in the dirt with a flint arrow point. These represented zigzag lightning (a), straight lightning (b), sun ray (c), and rainbow (d). The zigzag lightning and sun ray "had to have four angles." These symbols were believed to prevent the enemy from overtaking the party.

The return of the party. When the party arrived home a ceremony called the "swaying singing" was performed before the hogan of every warrior who had taken a scalp.⁸ "The

⁸ This swaying singing occurs today as a part of the War or Squaw Dance. It takes place just prior to and after the Squaw Dance proper. There is a massing of the singers in a more or less circular group. This group, as

swaying singing is also called *yikac*, which means 'grinding something to a fine point.' It is called this because the men are singing and grinding their voices." According to one informant, the warrior stood in the center of the singers, holding the scalp attached to his lance. According to another informant, the warrior retired to his hogan, leaving the scalp with the singers. The singers formed a circle about the scalp, shot arrows at it, swayed back and forth and sang, to the accompaniment of the pottery drum. The ordinary names (not the "secret names") of the dead enemy were mentioned in the songs, many of which were composed for the occasion. This "swaying singing" continued in front of the hogan until the warrior threw some property to the singers. This usually consisted of meat or "soft goods" (usually a portion of the plunder). Then the singers went to the hogan of another warrior who had scalped, and sang until they received gifts. "This giving of gifts to the singers is continued today. The visitors at the War or Squaw Dance stand outside the hogan and sing. The hosts are inside the hogan and throw out of the smoke hole money, cigarettes, candy, oranges, etc., before they will stop singing."

When the "swaying singing" terminated, the scalps were hidden in the rocks where no rain could reach them, until they were needed for a War or Squaw Dance. They were considered dangerous and were never taken into the hogan.⁹ The plunder which remained after the warrior had presented gifts to the singers, was distributed to parents, friends, and relatives.

A warrior who had killed a man, purified himself by taking sweatbaths and singing songs. This purification was sometimes not entirely successful and the warrior became ill from the after effects of the fighting. A War or Squaw Dance was then held to cure him. However, before such a curing ceremony could take place it had to be ascertained whether a white man, Mexican, Pueblo, Ute, or Apache was responsible for the sickness. This ceremony has been described by the Franciscan Fathers,¹⁰ Guernsey,¹¹ Parsons,¹² Reichard,¹³ and Tozzer.¹⁴

While the War or Squaw Dance is well known, its frequent association with the curing of women has at times been obscure. It is with this in mind that the following quotation is given, explaining why in recent times the women, more often than the men, have the War Dance performed for them.

it sings, sways slightly back and forth. According to the informants, the songs sung today are the same as those used in serenading the scalp.

⁹ The idea of taking a scalp into the hogan was thought to be ridiculously funny by both interpreter and informants.

¹⁰ Franciscan Fathers, *op. cit.*, 366-68.

¹¹ S. J. Guernsey. *Notes on a Navajo War Dance* (*American Anthropologist*, vol. 22: 304-307, 1920).

¹² E. C. Parsons. *Note on a Navajo War Dance* (*American Anthropologist*, vol. 21: 465-68, 1919).

¹³ Gladys Reichard. *Social Life of the Navajo Indians* (Columbia University Contributions to Anthropology, vol. 7, 1928), 112-33.

¹⁴ A. Tozzer. *Notes on Religious Ceremonials of the Navaho* (Putnam Anniversary Volume, Cedar Rapids, 1909), 299-343.

Formerly this ceremony was more for men because a warrior going to war so often and killing so many enemies began to feel its affect. The ghosts of his dead enemies were always after him. This War Dance either drove the ghosts away or killed them. A woman or a child might get this war sickness by coming in contact with the scalp that the warrior brought home. Also if a man whose wife was pregnant went to war and killed an enemy the child in later life would get this war sickness. Later on when there was no more war the people still got this sickness. There are various things that a person might do that will bring on this sickness. If a man or a woman has sexual intercourse with an enemy and that enemy dies the ghost will cause this sickness. Also if a man or a woman comes in contact with any article on which there is the blood of an enemy they will get sick. At the present time a lot of this sickness among the women is due to the fact that when the girls go off to school they come in contact with white men's clothes. If they wash a white man's clothes and inhale the steam from the water this brings on the old war sickness. That explains why it is mostly the women who get the war sickness today.

There was one other ceremony connected with warfare which according to informants was performed only twice in the history of the Navaho. This is the *nac'it*, "gesture dance," a victory celebration.¹⁵

When a Navaho was killed by an enemy a party was formed to avenge his death. If this party was victorious the leader would decide to give a *nac'it*. This ceremony was considered a "tribal" affair and everyone assisted in building the ceremonial hogan. Next a patient was chosen. This was usually a warrior who had accomplished something notable in the battle. "The patient was necessary because the Navaho cannot hold a ceremony without a patient." A Hopi scalp was one of the essentials of the ceremony even though the victory was over another people. The hogan was built in the fall or winter and "gesture dances" held at irregular intervals until spring. A large crowd always attended them. The dancers performed around the edge of this crowd and when they came to a warrior they stamped their feet in front of him and called out his name. At other times the men and women formed opposing lines and danced backward and forward, the men singing and making obscene gestures.

When spring came this "gesture dance" was brought to a close by the performance of the "present day War or Squaw Dance." "However, this War Dance was of five days duration, while in its usual form it lasts only three days." "At the end of the War or Squaw Dance everyone took their digging sticks and began to plant the same day."

Reichard¹⁶ has described the *nac'it* as being primarily political in character and this may be true. However, my own informants denied that it had any such connotation. The above account certainly lacks any political phase and suggests rather an introduced ceremonial, probably a derivative of the Plains, which failed to be absorbed into Navaho culture. This was further substantiated by one informant who said "They dance this dance after a war.

¹⁵ The accounts of this ceremony are traditional. There is no one alive today who has ever seen the ritual performed.

¹⁶ Reichard, *op. cit.*, 108-11.

They used to make war in the north at that time. The Navaho were friends of and fought with the Utes."

Peace making. The manner of making peace varied somewhat in accordance with the enemy with whom the Navaho were at war. The war leaders were not recognized as chiefs by the Navaho and only the natani or peace chiefs could make peace.

If the negotiations were between the Navaho and Ute, messengers were sent between these peoples to set a date and a meeting place for the peace chiefs. When the delegates met, a smoke was prepared. The side which had proposed the peace prepared the first pipe. The Navaho used a short tubular pipe. "The Ute had a pipe with such a long stem that the bowl rested on the toe of the man smoking it." The first puff of the pipe was taken by the enemy. Then all present smoked in turn. After smoking, the two peoples embraced each other and trading and gift exchange took place.

If the treaty was to be made with the Hopi, a Blessing Way chanter was sent to open negotiations. This man entered the village singing. "At times, this worked; at other times he was killed." This man arranged for a conference between the Hopi peace chiefs and the Navaho headmen. On the date set, a series of smoke signals were given by both peoples, announcing and answering the arrival of the Navaho so that they might come safely to the village. The delegates of each party rolled cigarettes "in their own way." The Navaho used "mountain" tobacco and corn husk. Harmless insects were put in the tobacco to make the Hopi friendly. "No doubt the Hopi did the same." Then each lit his own cigarette, passed it to the others and peace was concluded.

All treaties with the Mexicans were made at Santa Fé. "Usually, they would reach an agreement and the headmen would receive some canes as a sign the treaty was made."

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DAKOTA COMMUNITY

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THE ECONOMY OF A MODERN TETON DAKOTA COMMUNITY

THE values and attitudes behind the concrete pattern of a culture have been too often neglected by the ethnographer and, with unfortunate results, by administrator and missionary. Each culture holds and imbues its participants with a set of prime values which are expressed symbolically in the overt behavior of a community. Therefore, in order to evaluate the present-day economic behavior of a Dakota community it is necessary first to find out what master ideals were expressed in the ancient economy and what force they exert today.¹

The values upheld by a culture may be discovered by its conception of the Good Man. This Man is the ideal of perfection which all culture participants are supposed to emulate. His existence for the Sioux can be demonstrated by the important ceremonies, as for instance, the Sun Dance. There were certain very sacred parts of the ritual that were performed by a person who was recognized as a "good man" (*wicáca wacté*). This role had to be filled by one who had never committed murder, never been accused of adultery, who had been a warrior, who had performed many generous deeds and who was an old man, i.e., one who was beyond that age in which acts of passion are committed. A man who had so lived, and who by his age gave evidence of continuing so to live, was eligible for the character of the Good Man in Teton ceremonials. This role was not only a coveted honor which people strove to attain, it also served to objectify the ideals of the culture as expressed in personal conduct.

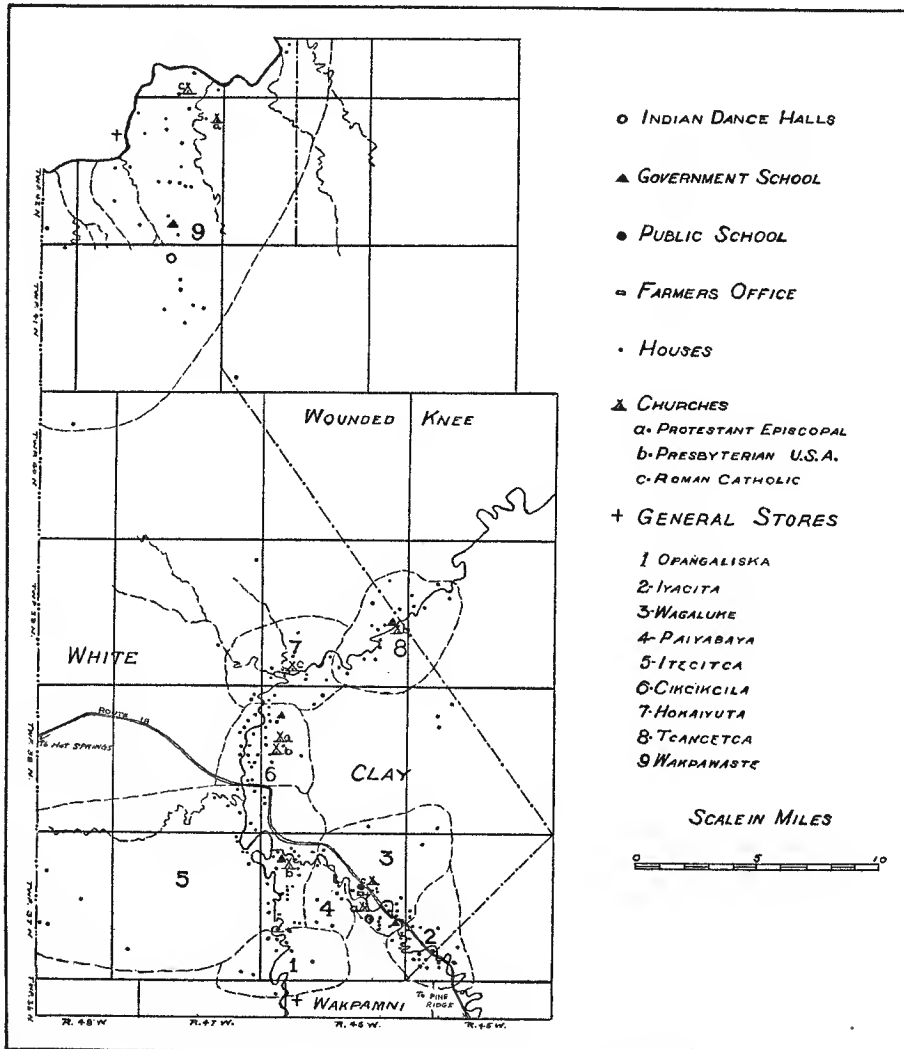
The Teton were supposed to have had four virtues, the first two of which are always named by informants in the same order—Bravery and Generosity. The last two, Fortitude and Moral Integrity, are not so explicit in general application. The stylized autobiographies, for instance, recited by individuals on public occasions consisted almost entirely of statements of brave and generous acts performed. Also each person used to keep an accurate record of such deeds and the tribal offices he had held on account of them, and would pit his number against any one else's when challenged to do so.² Nevertheless, these four virtues can be traced as ideals for all the social institutions, ideals which were striven for in every context of the culture under any pretext. For example, generosity played its part in any public gathering. It was always taken by at least one person as an occasion for the giving away of property. The social pretext might have been, for example, the presence of a stranger, a daughter's first menstruation, a son's first kill on a hunt, or a recital of former deeds. In the working of a specific institution such as marriage, both generosity and fortitude were stimulated. A man was praised for his "brave heart" if he bore stoically a shrew-

¹ This study is part of material gathered on field trips sponsored by the Institute of Human Relations, Yale University, 1929-32, and the Social Science Research Council, 1932-33.

² This is still true of the oldest generation today.

ish wife. The highest form of generosity was to give away a beloved wife, but the lowest of the low was he who regretted his deed and tried to get her back. He had lost his "brave heart."

Each institution had these prime values woven into it somehow. To negate these values meant the negation of the culture. Both missionary and administrator have at times tried



[FIG. 1. Map of White Clay Community, Pine Ridge Reservation.]

to re-form a primitive culture by attempting to suppress some specific behavior without appreciating fully the meaning behind that behavior. Unaccountably strong resistance has often been the result. For an attack on any one institution is an attack on specific values and therefore symbolically on the whole culture. Naturally resistance would be the result.

Keeping these formulations in mind, let us now turn to the study of the economy of a modern Teton Dakota community, that of the White Clay District on Pine Ridge Reservation, South Dakota. This community, on the western end of the reserve, is considered to be the most backward and to have the least admixture of white blood on the reservation. It contains about nine hundred and thirty of Pine Ridge's eight thousand odd Indians, who belong to the Oglala subtribe of Teton Dakota. The community contains nine bands (fig. 1).

When first known to white men in the eighteenth century, the Teton were exclusively a hunting people, the buffalo being the main source of food supply. This animal, however, was more than food. Practically every part of its body entered into some part of the culture. For example, its hide was used for shelter, its dried dung for fuel, its horns and skull in religious ceremonies. Its spirit was deified. It was the mainstay of the economy and the warp of religion. The loss of this animal proved to be a death-blow to the culture. A hunting economy gave way to a parasitic existence dependent on United States government rations. Native religion, powerless to return the buffalo, weakened. With the inauguration of the reservation and ration system intertribal warfare ceased. As a result the Teton men lost their traditional activities and along with them their chief paths to glory and prestige—warfare and hunting.

Three different strata exist in the present-day community—divided not only according to generation but also according to the particular way of getting a living which was in vogue during the impressionable years of those within the given stratum. The first group contains those who lived the hunting life from the age of at least ten. This stratum would include all born before about 1865. The second group would comprise the people who grew up during the time that the Sioux were rationed by the United States government. This would bring in those born after 1870 and before 1900. The third stratum is made up of all who have grown up during the period of the relatively recent government policy of forcing the bodily able to provide for themselves.

The first remember the days of the buffalo hide tipi. They used to wear their hair long, and may still do so today. They have been members of the Soldiers Lodges, have sought a vision, have at least witnessed the Sun Dance, have counted coup and hunted buffalo. In short, these people have lived the old life, and have been subject to the earlier form of economy. They and their fathers were lords of the prairie and made treaties as the white man's equal. They regret the passing of the old life and worship it as the ideal of something loved and irretrievably lost. For hours on end a group of old men will sit in a semicircle under a shade and discuss old times and the deeds of men now dead, while from mouth to mouth passes the inevitable red stone pipe filled with "red willow" tobacco. To a white man they will tell of their former freedom and their glorious well-fed existence, free from

disease. Then they will point out their present surroundings: the one room cabin, almost empty of food and bare of furniture. The younger generation no longer know how to conduct themselves. Saddest of all are their trachomous, tuberculous grandchildren. Thus have the good times passed, and their hearts become too grieved to talk further. If you ask an old woman whether she would like the old times again, she will invariably say, "Yes," but will add, "if we could be free from attack by the enemy." Evidently the cessation of intertribal warfare is regarded as a boon by the women, although it has robbed the men of their path to glory. All the people of this group remember at least the end of the struggle with the white man, and were conditioned to the values of the hunting economy. They live in the past and think of the future only with despair.

The second stratum, those people between thirty and the late fifties, have, like the first, been through the trying period of adjustment to reservation life, but their childhood knew the hunting, fur trading existence only from hearsay. Their stomachs started on government rations and their minds were tuned to a parasitic life which was regarded as their inalienable right by treaty. Treaty or no treaty, they feel entitled to support, since they regard themselves as robbed both of their land and their former economy. The older group feels likewise, but its attitudes are different in that the members actually know the older life and once met the United States government as equals. The second group knows itself only as a defeated tribe which is entitled to support. As a consequence these latter are more interested in getting something from the government than in re-living a past which is known to them only through legend.

The third stratum, those thirty years old or younger, know from experience neither the old life nor the full-ration days. They are of course the "better educated" stratum and regret the mistakes of their fathers and grandfathers in dealing with whites.³ They resent the leadership of the older men and believe that they, with their superior education, have better judgment and more knowledge for dealing with the reservation and Washington officials. This generation is far enough away from the past to make some sort of adjustment to the reservation, knowing that the day has come when the Indians are expected to be self-supporting and that the day may soon dawn when there will be no reservation, but just Indians among whites. Some are making a genuine effort to support themselves, others are not. None, however, accept joyfully their lot in life and there is no eager looking forward to the future among the children. The small boys may look forward to being able to rope a real horse some day and handle real cattle, but there is no genuinely eager anticipation of manhood and a man's task. Whatever adjustment is reached in the present reservation environment will be at best of a passive, listless sort.

Furthermore, farming has never appealed to the Teton Dakota, whereas the life of the cowboy caught their imaginations. The younger men imitate his dress in so far as their

³ The "educated group" should include those up to forty years old. "Education" to these people has a limited standard. The average accomplishment is about fourth grade, or lower, of grammar school. This includes the Carlisle men. The tendency of the youngest group is to progress further in school.

pocketbooks allow: broad brimmed hats, high heeled boots, and colored shirts. They enjoy bucking contests, entering them at rodeos off the reservation and insisting upon them at their own celebrations. Conversation always succeeds when it concerns horses. The cowboy's life, its hardships and its moving about, has captured the imagination of the Sioux. One of my interpreters, with whom I camped several weeks, was proud to answer my frequent apologies for bad cooking with, "I've been a cowboy. That's a hard life and I can put up with anything." Even the play of small boys is largely concerned with horses and roping. Of course many of these Indians have travelled in Wild West shows and are familiar with the show and trick side of cowboy life, but it is not only that aspect which appeals. Many of them have been employed on cattle ranches, and have been cowboys. That has been one of their closest contacts with the white man, a contact in which they could meet him on common ground.

The transition to a farming existence is far from complete. The land and the human material being what they are, one wonders as to the government's wisdom in having forced the Indians to attempt it. Farming is hard for them at best. Even white people come to farm and go away discouraged: the Indian has these for an example. In the spring an Indian starts to plough his fields with his winter-grazed team and has only to look across at his white neighbor doing three to six times the work with a tractor plough. Early frosts, fairly frequent drought, and intermittent hail are enough to discourage any man. The best that can be expected is for them to raise small gardens of hardy vegetables for home needs. Even this is difficult, since the families are usually away during the growing season. While the crops are maturing they often leave home to try to get a living, either from a more fortunate relative possessing money for groceries, or from some rodeo in a neighboring town. Quite often they return home after such a summer and find their crops destroyed from lack of care. Porcupines, stray horses and cattle have had their fill. The economic problem is no easy one for the Indian to solve.

Anyone who has seen either the haphazard existence of the Indians on Pine Ridge, or the quality of their land at the western end, will ask "How do they make a living?" If you pay a visit in early summer to one of the homes, you will probably see a small field planted with corn and some vegetables not yet ripe. If you are lucky you will find the family at home, but usually they are on the road at this season, either bound for a rodeo or the homes of distant relatives. If they are at home they are quite likely to be entertaining visitors. The children will be running listlessly about, possibly the boys will be roping an old tin can, and the girls playing house with a small tent. The women, when not preparing a meal, will be gossiping in the shade while they mend clothes or do bead work. The men may be repairing an old saddle, idly smoking and chatting, or they may be haying or away hunting stray horses.

After living with a Teton Dakota family for any length of time you are struck by the fact that there is no pounding away day after day on some one thing, no definite time-absorbing schedule of tasks that must be fulfilled each day. Hours for rising, for meals,

and for driving the horses to water, are fairly regular procedures each day. Other duties depend upon the season—ploughing in the spring, harvesting, haying, freighting, and potato-digging in the fall. The summer and winter are off seasons for economic gain, except for the summer haying. Summer is the time for traveling, and winter for dancing. Thus the autumn months prove the most lucrative: there is hay to be sold to the trader or government, as well as freighting of winter supplies for the government stations from the nearest inland point to the place of assignment. September finds many wagons on the road with an extra team. Government trucks could well do the work more efficiently and cheaply, but the freighting is given to the Indians as one of the few jobs available to them.

The actual amount of money coming into the White Clay district per year is hard to estimate.⁴ The sources of income include land leases and sales, Sioux Benefit money, scout pensions, payments for freighting, sale of crops and hay, salaries, and wages.

Money from land leases amounts to very little. In 1931, on account of drought, many short-term grazing leases were made by white cattle owners who usually ran their cattle on land outside the reservation. This brought the total income from land leases much higher than it had been in years just previous. Land sales are very rare on this part of the reservation, and most of the sales were made by the few mixed-bloods in the community, whose land had been fee-patented.

Another source of money is the Sioux Benefit Fund. This is a fund established by treaty to induce the individual members of the Sioux people to take allotments in severalty (Sec. 17, Act of March 2, 1889, 25 Stat. 888). Each head of a family or single person over eighteen years old, who has an approved allotment receives a certain sum of money which is equivalent to the cost of certain household effects and farm implements specifically named in the Act of 1889. Occasionally the actual cost of purchasing this equipment is re-assessed. In 1930 the assessed value was five hundred dollars. Expenditure of this money is supervised by the government through the district farm agent. The money is supposed to be used for starting the boy in some occupation and supplying the girl with household goods. If either a boy or girl is tuberculous, the money may be spent for better food. Some of the most common purchases in 1930, with their approximate prices were:

For the boy: team (\$80), wagon (\$150), harness (\$70), plow (\$55), corn planter (\$35), stock saddle (\$60), logs for house (\$45), cow, livestock, subsistence.

For the girl: team, wagon, harness, sewing machine (\$35), tent (\$25), bedstead (\$35), bureau (\$15), cook stove (\$40), kitchen utensils, subsistence, clothing.⁵

⁴ The following data on income are based on an investigation made during the field trip of 1931. A period from July 1930 to July 1931 was arbitrarily chosen.

⁵ Sometimes the money goes astray. Once in a while one hears of an Indian who receives permission to buy some necessary implement which he immediately after sells to some white man for a third or a tenth of its cost. This is a method of obtaining cash to buy something which the Indian wishes, but for which he cannot get a purchase order from the government.

There are from ten to fifteen people on scout pensions in the community.⁶ The pensions are from \$30 to \$50 a month.

Figures for the amount of hauling of government freight were not procurable from the White Clay district. The amount paid out by the government in 1930 on Pine Ridge as a whole was \$13,280. If the hauling had been fairly evenly divided among the districts, the Indians in White Clay would have received about \$1,895.

Crops are not sold on a large scale: corn and beans are sometimes sold in small amounts. A few years ago there was an attempt to encourage the Indians to raise wheat in quantity, but this did not prove successful. Hay is the largest product, of which about five hundred tons were sold in 1930 to the government and district trader. The average price was about five dollars a ton.

In 1930 there were about twelve men in the White Clay community receiving a steady monthly salary: six catechists or lay ministers, \$10 to \$25; four government Indian policemen, \$45; one government farmer (really a sub-agent for the district), \$150; one assistant government farmer, \$80.

Two contiguous Indian reservations with a combined population of fourteen thousand people offer a large supply of potential labor which neither South Dakota nor Nebraska can possibly absorb in their present state of economy. The only Indian on steady monthly wages in the White Clay district was the cow hand who worked for the trader; in 1930 he received \$50 a month. Nebraska does call for potato-diggers during October, one of the Pine Ridge Indians' few opportunities for financial remuneration. Families will travel year after year to the same potato grower's place, where they camp until the crop is harvested. Payments are usually determined by the number of rows dug, and every able member of the family helps. Before starting back to the reservation, the Indians are usually allowed to fill their wagons with potatoes. Sometimes a man has his family dig while he himself sells his services and the use of his wagon for hauling sacks of potatoes. In this way a family may earn from fifty to a hundred dollars a season. In the White Clay district 62 out of 101 families questioned on this point went to Nebraska to dig potatoes in 1930, earning an average of \$76.70.⁷ This money goes far toward getting a family through the winter.

The average total yearly income per family is very hard to estimate since no records are kept by the Indians themselves. Over 125 families in the community were questioned on this point, and an approximate picture can be drawn from the 118 who had some idea of the amount. The average income per family was \$152.80. A household in this district

⁶ A scout is an Indian who was enrolled in the United States Army and was used for reconnoitering hostile Indians when the troops were in the field during the period 1855-91.

⁷ The number of families who go to Nebraska has probably increased since 1932. Before then, Indians with children in day schools were prevented from going, because they were subject to arrest for removing the children from school to make the trip. The potato harvest usually comes after school has begun in the Fall, and the Teton men always travel with their whole families. Now they may get permission to take the children out of school for potato-digging.

averages 5.4 persons. This seems an almost impossible sum for a family to survive on, but several things must be considered.

First, there were about 200 families on rations during the summer and 300 during the winter. These rations are pitifully small, yet they help greatly toward mere sustenance.

Second, the standard of living is on the lowest of subsistence levels—this means barely enough food and clothing. Aside from horse-flesh, choke-cherries, and garden produce in season, the food staples are coffee, the grounds of which are often used many times, flour, and pork fat. The flour is either boiled with choke-cherries or vegetables, or mixed with water to make a fried "bread." Salt and baking powder are added to the bread dough when there is money to purchase them. Clothing for the men consists of overall trousers and shirts. The women make simple dresses from calico. A shawl completes the costume. Loot from missionary barrels and occasional issue of old army stores help provide warm clothing for the winter. Most Indians are none too warmly dressed. If you add to this clothing and food a roof overhead, a few household utensils, ponies, a team of horses, a wagon, farming tools, and a few chickens, you have almost a complete picture. The following data obtained in 1931 will give some indication of conditions:

Type of House. Of 154 houses which are either cooking or sleeping rooms, or both: 14 are frame and two-roomed; 133 are log and mostly one-roomed; 3 are a combination of log and frame; 4 are crude shacks (built and left by former white rentees for summer residence while tending crops). For roofs 86 of these houses have earth, 62 are shingled, and 6 are tar-papered. Board flooring is laid in 110 houses, while 44 have dirt floors.

Significant Equipment in 133 Families.

Beds, 316 (almost all double): 2.4 per family

Chairs, 356 (many houses have benches): 2.7 per family

Sewing machines, 100: 1 to every 1.3 families

Time piece, 73 (alarm clock or watch): 1 to every 1.8 families

Automobiles, 32 (almost all Model T Fords): 1 to every 4.1 families

Sweat Lodge, 6: 1 to every 22. + families

Statistics Taken from Government Farmer's Report, Oglala, 1931.

Total number of acres under cultivation in the district: 2165. (This would be an average of 16 acres per family—this figure seem too high.)

Livestock: horses, 1988; cattle, 194; pigs, 42; chickens, 1502.

Number of root cellars: 99.

Number of farmers: 158.

A third reason why a family can subsist on so small a cash income is that the land, if not fee-patented,⁸ is tax-free.

Fourth, there is the soil, from which in good years some food can be wrested. In recent years, however, horse flesh has been resorted to more and more during the winter.

⁸ There are only about ten to fifteen full-blooded Indians with land so patented. Most of these were forced on them during the World War and are to be returned to government guardianship.

Finally, aside from the material reasons, is the levelling operation of certain social customs. Whatever money does come into the community is quite evenly divided by the functioning of many customs, which, in their totality, virtually prescribe a state of socialism. This is one of the most characteristic features of Dakota culture and deserves lengthy consideration. The two cardinal values of the culture have already been mentioned—Bravery and Generosity. In connection with the latter it becomes clear that a society may build its values on the retention or release of wealth (or disregard it entirely). American society, for instance, utilizes the retention of wealth as one method of social ordination. It is in this sense a wealth-graded society, based not only on the amount of retention but also on the duration of the retention within a given family line. Release of wealth plays only an ancillary role. Teton Dakota society, on the other hand, has founded its cardinal values on the release of wealth—the amount released by an individual at any one time and the number of times so released. Even at the present day this attitude toward wealth is one of the most outstanding characteristics of a Teton Dakota community and has proven to be one of the foremost stumbling-blocks to missionary and administrator alike. For there can be little compromise between such diametrically opposed viewpoints as the Teton and American on the symbolic use of wealth in the social scheme.

The major configurations which express Generosity as an ideal and which make for an even distribution of goods, may be discussed under the headings of (a) hospitality, (b) give-away, and (c) giving of honor.

(a) According to the existing pattern for hospitality a man, with his whole family, may visit his own or any of his wife's relatives for an indefinite period. When a man's food is low, or all gone, he may hitch up his team and take his family for a visit. Food is shared equally until none is left. It is not necessary for anything to be provided by the visitors. Really long stays, however, are made only on very close relatives. Some sons-in-law, for instance, are quite parasitic.⁹ The result of this actually is that no man, however industrious, can get very far ahead of those about him and still remain an active member of the community. He is literally eaten down to its level. Those with salaries, almost without exception, have, at the end of the month, grocery bills equalling, or in excess of, their pay. Some give up their positions to relieve the drain, since they find themselves further behind than if they had had no job. By the custom of hospitality, however, many families are kept alive, and the government relieved of this burden.

(b) The "give-away" is another custom which tends to level wealth. It fits into many different social contexts and is a method of giving vent publicly to some sentiment or emotion. It occurs at weddings, funerals, births, on the occasion of recovery from sickness, joy in the return of some dear one, etc. At funerals a man may give away everything he

⁹ Parasitic sons-in-law illustrate the disequilibrium of values in a broken-down culture. The social prestige of the good provider in the hunting economy has not been carried over to the agrarian set-up. On the other hand, the virtue of hospitality and giving have remained, hence the growth of parasitic persons. In the older culture a balance was established by the interlocking of hospitality and prestige in hunting, so that a son-in-law would pay visits and yet contribute to the support of the household.

owns, so that he is literally left with only the four bare walls of his house and the clothes on his back.¹⁰ His close relatives may also contribute to this give-away. Then, too, it is the privilege of those invited to take anything withheld or not specifically given. A give-away is usually held at wedding feasts and may entail the bestowal of much property on the guests. "Give-away" on a small scale occurs on such minor occasions as a feast in honor of the recovery from sickness of a son; or the presence of a stranger at a public gathering. At Fourth of July celebrations since 1892, there have been big "give-aways" called *maza cala* (literally "red iron," i.e., "penny"), in which one band gives away to the poor people in the other bands. Originally whoever received in a gift a certain penny was the leader of the "give-away" the following year. At present he is chosen by the chiefs in the community.¹¹ In the interim he, with the help of his band, gradually collects beadwork, horses, pieces of cloth, trunks and household utensils, which are given away the following Fourth of July after being paraded around the camp circle. The collection of these goods is accomplished by means of feasts given by the leader. He arranges a feast in honor of someone, who returns the compliment by making a present, which is then put with the collection for the *maza cala*.

(c) Another custom, socialistic in import, is the "begging dance." The Indians do not look upon it as begging because there is an exchange of values considered real and equal.¹² It might be called "honoring someone." However, they may regard it as a nuisance, especially if they happen to have a little money. This may be done by a feast, a dance, a song, or an announcement. The feasts for collecting *maza cala* goods would come in this category. At large community dances the singers receive their pay by singing to some one known to have money. The dance committee, and others who choose, may dance to the song. Again, when on the road to a rodeo, the camp officers are fed by four people who have responded with food to the camp crier's praise. Also, one individual may sing to another. In all these cases the praise is indirect. That is, a man's wife, his child, or favorite horse, may be praised, and thus the man himself honored. He it is that must respond, often in the name of his wife or child, by giving equal value in material goods. In all these ways, then, do the goods in the community freely circulate and thus become more or less evenly distributed.

Therefore, even though the family income is limited, it can be readily seen from the reasons given above that there are many factors operating which allow a family to survive.

There is no invidious comparison of wealth, leading to expenditures of pure prestige value as in our society. The fact that this configuration is as true today as it was in the past may be in large measure due to extreme poverty—or again it may not. Even in former

¹⁰ The police are trying to break up the extreme form of "give-away" in which the man is left absolutely destitute, and even the community is growing away from the extreme form.

¹¹ In 1931 it was voted that the *maza cala* should be discontinued as it worked too much hardship on the people and no longer served the ends for which it was designed. Some say the gifts went only to those who were able to reciprocate rather than to those in need. There has been talk of reviving it, however.

¹² For instance, John Colhoff, one of my interpreters, quite well informed, did not know to what "begging dance" referred in the literature he had read. He was much surprised when I told him.

times a chief was often the poorest man in his group, although richest in esteem for that very reason. The most despised man was he who was rich but did not give out his riches to those about him. He it was who was really "poor." The idea of storage over a prolonged period of time is foreign. The storage of any material object not only has no personal value but has a negative social value. If a man has enough to keep starvation at least around the corner, has sufficient time for meditation, and something to give away now and then, he is relatively content. If a man does harvest and store a crop for the winter, it is gone long before the winter is over. Relatives have seen to it that the owner was not neglected for visits.

Farming remains an economic necessity but hardly a social asset. There are no institutions, spontaneous parts of the community, which create or uphold value in the act of getting a living. Remnants of old institutions still exist, which maintained value in quite another economy, hunting. But they were not picked up and given new form and new motivation. The farming pattern has never been grafted upon any of the native institutions such as the "bands" which today form "natural" communities, and as a result there is, with few exceptions, little enthusiasm for farming and little pride in being known as a successful farmer.

Enthusiasm for farming has not been aided by the fact that the Indians know that the government will provide for them somehow, should they become destitute. This has undoubtedly had a pauperizing influence.

There is, it is true, religious and governmental pressure from outside which aims to reform the attitude toward self-support. This has made headway only with those who take Christianity very seriously, although the United States government and missionaries have succeeded in getting most of the Indians to raise small gardens for their own needs.

The institutions which try to build new values in the community are the Boss Farmer's office, the schools, the Christian Church and the Farm Chapters. The best the government farmer can do is to encourage, expostulate, or threaten. He, along with the other United States government employees, is regarded as belonging to an alien servile group. This is true even when an Indian is so employed. The government schools do try to inculcate the value of making a living and teach a trade in the upper grades. Much of this influence is lost when the Indian returns to the reservation.

The only organization to which farming has become linked is the Farm Chapter, organized through the United States government and attached to the Indian Day Schools. These Chapters, or Clubs, are kept alive largely by the efforts of the government. This is true even though there is a demand for such organizations and though they have native officers. Membership is seldom defined by community affiliation, nor is there any prestige attached to such membership. There is no aura of sentiment around the chapter which indissolubly binds it and those individuals associated with it into a social integer.

Most of the younger Indians feel that the time is coming soon when they will have to do more for themselves, but it is felt as an outside pressure, not one from within. Jobs are

almost impossible to find. More important, the returned student feels himself, and is felt to be, a misfit in his community.¹³ To be happy he has one of two choices: to separate himself from his own kind and identify himself completely with the white group in some town or to give up his newly-learned values and become re-identified with his community. He who criticizes the "going back to the blanket" of returned students has no realization of the compelling power of cultural institutions. In a way the Church has an advantage because it deals, theoretically at least, with one whole cross-section of the community. The make-up of a congregation is much more homogeneous than among ourselves, since membership is largely by band or local sections of bands. To the native however, the Church also is largely a "they" group and is definitely associated with the "white man's way"—a way which force of circumstances has thrust more and more upon him.

Economic activity within a well-integrated society exists not only for the mere perpetuation of its members but is inextricably woven into the social fabric, on which it appears as a motif, many times and in many different contexts. In Hopi society, for instance, agriculture is God-given. Religious ceremonies and secret society activities revolve around the agricultural problem. Farm land emphasizes clan denotations. A man's diligence in farming is an asset in marriage. The whole society can thus be viewed as dependent upon, directly or indirectly, some aspect of the activity of farming. It is basic material for many or most social and religious patterns in Pueblo culture. The denotating function for differentiation of the social structure into units and the welding function for integrating that structure into a social whole may both be illustrated from economic activity in any stable society.

The Sioux man gave up his hunting only after game had disappeared. At first he depended largely on the United States government for support but gradually he was coaxed to farm and raise cattle. Later he was encouraged to sell off his cattle and depend upon farming. For the old Indian the first change meant a drastic revolution, the effects of which still reverberate in the younger generation, which knows no other life than the present. In so far as the Teton Dakota raise gardens, they have made a change of vocation, yet if one examines their institutions one finds how little farming has entered into the social context.¹⁴

Agriculture then is apparently not securely rooted, since it does not enter the social patterns deeply; since the Indians feel that there is a last ditch—the government—for support; and since their patterns oppose economic accumulation. It is not an integral part of the social whole, coalesced by sentiment, reenforced by value, and maintained by prestige.

¹³ Within the past few years the government has shifted emphasis rightly to day schools instead of non-reservation boarding schools.

¹⁴ Since the writing of this paper, the present Indian administration has shifted toward a cattle economy for the Pine Ridge Sioux. Also emergency funds have provided a temporary wage-work economy which has made many changes; however, these are largely superficial from the viewpoint of major cultural configurations.

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THE DISTRIBUTION OF THE NORTHERN ATHAPASKAN INDIANS

INTRODUCTION

THE need for a serviceable anthropological map of the Northern Athapaskan (Déné) area appears to everyone who has interested himself in this field. The best of the more or less satisfactory attempts during the past hundred years have been limited to various geographic or tribal subdivisions. These, although valuable in themselves, fail to orient the relative parts of the area as a whole. The maps which I have sketched out from time to time for my personal use have made me aware of the difficulties and objections which will arise with any attempt based on our present limited information. In offering the present map, I do so acknowledging problems, the following discussion of which may increase considerably the value of the map itself.

It should first be noticed that this map includes only the northern division of the Athapaskan (Déné) speaking peoples and excludes the other two generally recognized divisions, the one on the Pacific coast of the United States and the other in the Southwest. The latitude of the greater part of the United States-Canadian border serves as an arbitrary line of division. By definition, therefore, all the Athapaskan speaking tribes of Canada and Alaska compose the Northern division, a grouping which appears correct both ethnologically and linguistically.¹

The greatest difficulty in preparing a map lies in presenting a consistently equivalent nomenclature. Theoretically one might proceed from the standpoint of culture, of language, or even of physical type. One discovers, however, that the literature contains hundreds of native terms, or translated equivalents, concerning which it is frequently dubious whether a village, a band, a tribe or a larger grouping is indicated, or whether the distinction is cultural or linguistic. An attempt to put this unevaluated terminology on a single map of convenient size results in an almost illegible conglomeration of what are, for those who are not Athapaskan specialists, unpronounceable names difficult to remember. The reduction of the terminology becomes perplexing when it is realized that data on physical type are almost non-existent and that both the linguistic and the cultural data are insufficient over large areas. The seemingly simple problem of setting down "tribal" names results in complications over the question of what groups among the Athapaskans should be regarded as tribes. The Athapaskans do not consider themselves as composing neat political or cultural units. Experience in the field shows that, at least in the present state of cultural disintegration, informants generally align their village with the nearest surrounding villages and exclude those beyond a certain range, thus forming units which overlap if depicted graphically.

¹ The possible exceptions would be the Sarsi, who, for the last few hundred years at least, have had a definitely Plains culture, and also the Tagish, who are spoken of as a Tlingit speaking group with an Athapaskan culture. Our information on the Tagish, both linguistically and culturally, however, is decidedly limited.

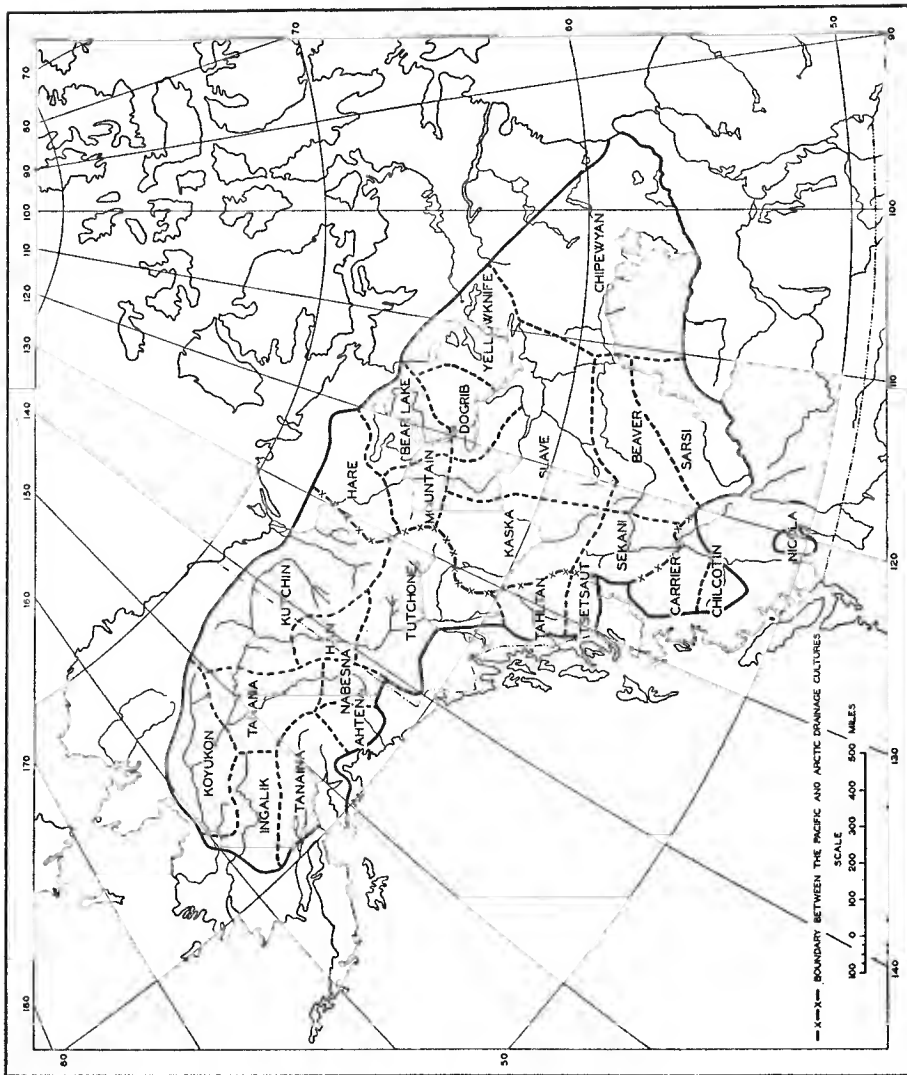


Fig. 1 Distribution of the Northern Athapaskan Indians.

There are a certain number of exceptions to this rule, notably the Kutchin.² A presentation of the statements in the historical literature, however, certainly leads to this type of overlapping.

Another difficulty lies in the chronological variation, the differences in the actual time, during a period of centuries, at which studies of distribution were made. Geographic, cultural, and, to a lesser extent, linguistic changes have occurred during the period of historic contact.

When one attempts to meet these problems, the natural geographical distribution of the Athapaskan peoples proves extremely significant in that almost all the Indians are directly associated with rivers or lakes which serve as routes of travel and from which fish, so important in their food supply, are obtained. Other factors in selecting a serviceable terminology must include the recognition of widely accepted terms, their pronounceability, and a special consideration for the names of groups already established as units of reference in the more important sources. In each case I have tried to choose the group name which has most in its favor, all factors considered. The method of selecting both name and area is frankly arbitrary, in the last analysis, but I hope that the result will be the more useful for the general ethnologist. In showing the distribution of Athapaskan groups on the map, I have tried to meet the chronological problem by placing them approximately where they were at the time of first European contact, giving the dates and historic movements in the discussion which follows.

THE NORTHERN ATHAPASKAN GROUPS

The following list represents the selected names for the twenty-five major groups into which I have divided the Northern Athapaskan Indians. In brackets are the one or two recognized terms which might have been used. (They must not be considered synonymous, however, without reference to the limitations of the areas hereafter defined.)

Ahtena [Atnas; Copper River]
Bear Lake [Satudene; Great Bear Lake]
Beaver [Tsattine]
Carrier [Takulli]
Chilcotin [Tsilkotin]
Chipewyan [Montagnais]
Dogrib [Thlingchadinne]
Han [Hankutchin]
Hare [Kawchodinne]
Ingalik [Kaiyukhotana]
Kaska [Nahani]
Koyukon [Unakhotana; Tenas]
Kutchin [Loucheux; Dindjie]

² Caused by the isolating factor of their divergent dialect.

Mountain [Montagnais³; Montagnard]
 Nabesna [Nabesnatana; Upper Tanana]
 Nicola [Stuichamukh]
 Sarsi [Sarcee]
 Sekani [Tsekehne]
 Slave [Slaves]
 Tahltan
 Tanaina [Knaiakhotana; Kenaitze]
 Tanana [Nukluktanas; Lower Tanana]
 Tsetsaut
 Tutchone [Tutchonekutchin]
 Yellowknife [Tatsanottine; Copperknife]

In the discussion of each individual area I have attempted a systematic and simplified presentation of certain facts, using the following headings:

Range. The date of first European contact and date of first settlement within the area occupied by the group. This is followed by a brief statement of the geographic distribution of the group about the time of first contact and a mention of any significant known changes which have followed.

In many cases the dates given are not certain and in a few it has seemed wise to add a question mark. The geographic ranges in one way are exact since the constituent subdivisions of the groups are arbitrarily included or excluded. Factually, however, they are frequently not exact which is in part due to changes in the boundaries of adjoining groups after the date of historic contact with one of them. There are admitted objections to any decision.

Comment. Under this heading I have given, when they are available and appear valuable, such subdivisions as fit within the areas defined. These subdivisions are not comparable among the several groups, ranging from what might be described as "tribes" to very fluid "bands." In certain instances I have added critical comments and a discussion of my reasons for making a selection to form the arbitrary alignment of a major group.

Reference. My purpose has been to give the best reference to a source of general information on each group. Where superior manuscript material is known, that too is mentioned since most of this will be published eventually.

Handbook. Here I have given the term under which the group is referred to in the "Handbook of American Indians." Some of these terms might not otherwise be found easily and they are particularly valuable for bibliographic references. A brief comment, when possibly valuable, has been added on the Handbook statement.

Name. Finally, I have made a comment on the selection of the name used for each group. I have avoided those of over three syllables. Also, I have been prejudiced in favor of previously recognized terms and those most easily pronounced.

³ Not to be confused with the term sometimes used as synonymous with Chipewyan.

AHTENA

Range. (Contact ca. 1781; settlement ca. 1900.) The drainage of the Copper River in south central Alaska.

Comment. Allen (1887: 259) subdivides them into two groups:

1. Midnoosky—Copper River from mouth to Tazlina River, and drainage of Chitina River.

2. Tatlatan—Copper River above Tazlina River. Hoffman (1882: MS) subdivides them into six groups:

1. Ikherkhamut
2. Kangikhlukhmut
3. Kulushut
4. Shukhtutakhlit
5. Vikhit
6. Kulchana

The last of the six groups seems to be an erroneous generalized extension of the Ahtena people. No specifically ethnological study has been made of this group.

Reference. Allen (1887: 19-23, 127-36).

Handbook. Under Ahtena for good summary account of available data and bibliography.

Name. Following the Handbook as probably the most widely known name,⁴ although its origin is uncertain.

BEAR LAKE

Range. (Contact and settlement ca. 1792 at the site of Fort Franklin.⁵ Since that time there has been only periodic contact.) The region of Great Bear Lake in Northwest Territories, Canada.

Comment. The Bear Lake Indians may be subdivided into the following five groups:

1. De-lini-go-tini—the people who live around the head of Great Bear River.
2. Eta-tco-go-tini—the people who live on Big Point (between Keith and Smith Bays).
3. Eta-tcin-la-go-tini—the people who live on Caribou Point (between Dease and McTavish Bays).
4. Ewi-go-tini—the people who live on the point between McTavish and McVicar Bays.
5. Sa-xo-zue-go-tini—the people who live around Bear Mountain (between McVicar and Keith Bays). This group is largely mixed with Dogribs as the result of immigration about 1914.

⁴ If the name means "Ice People," it is probably from their own designation; if it means "enemies, aliens," as would appear by linguistic analogies, the designation was probably given by some neighboring people.

⁵ Petitot (1875: 21) says 1792; Franklin (1828: 291) says 1799; Keith in Masson (1890: vol. 2, 106) says ca. 1800.

The above groups are not stable but probably not much less so than the "bands" of the Hare and Dogrib. The Bear Lake Indians have been distinguished from the Hare because they themselves deny that an inclusive grouping is correct.

Reference. Osgood (1932a).

Handbook. There is no specific reference for this group.

Name. The name is the English translation of the term by which the Indians of this group speak of themselves collectively and which they consider as mutually exclusive as the native terms for Hare and Dogrib.

BEAVER

Range. (Contact 1786; settlement 1790 at Peace River Crossing.) Before the middle of the eighteenth century, the western end of Lake Athabasca was probably occupied by the Beaver as well as the drainage of the Peace River below Peace River canyon. By the end of the eighteenth century the Beaver apparently had been pushed up the river away from Lake Athabasca to the Vermillion Rapids. During the twentieth century a large part of the Beaver territory was taken over by Europeans and many of the Indians were allocated to reservations. General location—Northern Alberta.

Comment. Jenness (1931: 23) subdivides the combined Beaver-Sekani groups, three of which may be considered as Beaver:

1. A group extending from the junction of the Smoky and Peace Rivers to the falls below Fort Vermillion.
2. A group on Peace River from its junction with the Smoky to Hudson Hope.
3. A group on the headwaters of the Smoky River.

These divisions were represented at the beginning of the nineteenth century.

Goddard (1916: 208) subdivides the Beaver as they existed in 1913 into four groups:

1. Fort St. John group—"They hunt northward to the headwaters of the Liard River and camp as far down the Peace as North Pine River."
2. Dunvegan group—"They hunted northward to the headwaters of Hay River." "They also occupied considerable territory south of Peace River."
3. Peace River Crossing group—around the town of Peace River (this group is practically extinct).
4. Vermillion group—"They live on a reserve along Paddle River, and hunt and trap westward toward Hay Lake, and north and eastward toward the Caribou Mountains."

The whole problem concerning the distribution and subdivisions of the Beaver Indians is a complicated one. Fortunately, the subject has been specifically dealt with in scholarly fashion by Jenness, and his paper on "The Sekani Indians of British Columbia" is particularly recommended to those wishing detailed information.

Reference. Goddard (1916).

Handbook. Under Tsattine for incomplete statement.

Name. Following Goddard as most widely known name. It is their own designation for themselves.

CARRIER

Range. (Contact 1793; settlement 1806 at Fort St. James.) The region of Babine and Stuart Lakes, British Columbia.

Comment. This group includes the Babines and Carriers of Morice (N.D.: 37 ff.) who subdivides them as follows:

1. Babines (Nato·'tinne, their tribal name).
 - a. Lake Babines—Babine Lake and north to the Tsimshian Kitskan and north-east to the Sekani.
 - b. River Babines—Whole basin of Bulkley River and western halves of Lakes French, Cambie and Dawson.
2. Carriers (Takheł, their tribal name).
 - a. Tlaz·'tenne—Lake Tremblay and upper end of Lake Stuart.
 - b. Na·'kraztli·'tenne—lower half of Stuart Lake.
 - c. Natlo·'tenne—Frazer Lake.
 - d. Tano·'tenne—Fort George.
 - e. Nutša·'tenne—Basin of the Blackwater River.
 - f. Nazkhu·'tenne—Quesnel and mouth of Blackwater River.
 - g. Łthau·'tenne—Fort Alexandria.

Jenness (1924a), in mapping the Carrier subdivisions as they were in the second half of the 19th century, adds three more in the central part of the area than appear on Morice's list.

Reference. Morice (1890 and 1895); Jenness (1924a).

Handbook. Under Takulli.

Name. Following Morice as most widely known name. It is from the Sekani designation.

CHILCOTIN

Range. (Contact 1793; settlement ca. 1865 ?) The approximate drainage of the Chilcotin River, a western tributary of the Frazer River, in British Columbia. In recent time there has been some encroachment into the territory of neighboring groups.

Comment. Teit (1909: 760) subdivides them as follows, giving the early division and that under modern conditions:

Probable early subdivisions:

1. People of Nacoontloon Lake.
2. People of the district around Puntzee and Chezikut Lakes east to Alexis Creek.
3. People south of the Chilcotin River.
4. People around Tatla Lake probably formed a fourth group.

Modern subdivisions:

1. Lower Chilcotins—originally from Nacoontloon Lake region.

a. Anahem band—live in a village on the north side of the Chilcotin Valley about eight miles from Hanceville.

b. Toozey's band—live on Riskie Creek not far from the Frazer River in Shuswap territory.

c. Alexandria band—located at Alexandria in Carrier territory.

2. Stone Chilcotin or Stonies—south side of Chilcotin River.

3. Stick or Upper Chilcotin—scattered communities around Chezikut, Puntzee, Anahem or Nacoontloon, Tatla, and Chilco Lakes, etc.

Reference. Teit (1909).

Handbook. Under Tsilkotin for incomplete statement.

Name. Following widely used simplified spelling of only name, their own designation for themselves.

CHIPWEYAN

Range. (Contact ca. 1700; settlement 1717 at Churchill, which was not truly in Chipewyan territory but practically became so about the time of contact; settlement 1778 at Elk River; 1788 at Chipewyan on Lake Athabasca.) The region about Lake Athabasca except for the extreme western end; the country north to Great Slave Lake, south to the Churchill River, and east over a roughly triangular section to Hudson Bay. With the coming of the white traders, the Chipewyan extended their territory west and northwest, occupying the lower Peace and the Slave Rivers.

Comment. Petitot (1891: 363) subdivides them into six groups:

1. Tpa'itsan-Ottinè—gens de la crasse de l'Eau, Couteaux-Jaunes, etc.—Sur la côte septentrionale et dans les baies orientales du grand lac des Esclaves.⁶

2. Edjiéré-tpou-kkè-nadé—gens du Boeuf—Le long de la rivière aux Buffles.

3. Des-nèdhè-kkè-nadé—gens de la Grande-Rivière, Tchippewayans—Le long de la rivière des Esclaves.

4. Yéta-Ottinè—gens d'En-haut, ou Kkpay-tpèlè-Ottinè, gens du Plancher des Saules, Tchippewayans—Sur les bords méridionaux du lac Athabasca.

5. Éthen-eltèli—Mangeurs de Caribous, ou Thè-yé-Ottinè, gens du Fort-de-pierre—Entre le lac Athabasca et le lac Caribou, ainsi qu'entre ces deux grands lacs et la Baie d'Hudson.

6. Thi-lan-Ottinè—gens du Bout de la Tête, sous-entendu de Géant glaciaire arctique—Du portage la Loche à la Saskatchewan du Nord.

The first of these, Tpa'itsan-Ottinè or Yellowknife, have been distinguished as a special group. Some Athapaskan specialists might wish to distinguish others, such as the Éthen-eltèli or Caribou-eaters, but I see no particular reason for doing so with our present paucity of specific data.

Reference. Birket-Smith (1930).

⁶ It has appeared advisable to retain the original French of Petitot for correlation of the geographical terms with his maps. I therefore have made quotations in abstraction, so to speak.

Handbook. Under Chipewyan for poor statement.

Name. Unquestionably the most widely recognized name. It is from the Cree designation.

DOGRIB

Range. (Contact ca. 1740; settlement 1790 at Marten Lake.) The country between Great Slave and Great Bear Lakes, Northwest Territories. Since 1913 there has been definite admixture with the Bear Lake Indians.

Comment. Petitot (1891: 263) subdivides them into four groups:

1. Ttsè-pottinè—gens des Canots en écorce, gens du Lac—Autour des rivages méridionaux du grand lac des Ours.

2. Tpa-kfwèlè-pottinè—gens le l'Anus-de-l'Eau, gens du large—Au sud-est du grand lac des Ours, et à la source du fleuve Coppermine.

3. Tsan-tpié-pottinè—gens du lac Excrémentiel —Autour du lac la Martre et le long de la rivière de même nom.

4. Klin-tchanpè, Flancs-de-Chien, Plats Côtés-de-Chien proprement dits—Le long de la baie du Nord du grand lac des Esclaves.

In 1932 I published a map of the Dogrib subdivisions (Osgood, 1932a: 34) which agrees with Petitot except that my informants definitely placed my group 3 (Petitot's 1) south of Great Bear Lake, rather than around its southern shores.

Reference. None recommended.

Handbook. Under Thlingchadinne for a confusing statement.

Name. Unquestionably the most widely known name; from their own designation.

HAN

Range. (Contact ca. 1847; settlement periodic from ca. 1875 at Fort Reliance, near modern Dawson.) The Yukon River drainage between 64° and 66° north latitude, Yukon Territory, Canada, and east central Alaska.

Comment. The Han may be subdivided into two groups:

1. Klondike group—centering at the confluence of the Klondike and Yukon Rivers.

2. Eagle group—centering at the village of Eagle on the Yukon River (near the United States-Canadian border).

It may be possible that formerly there were three subdivisions of the Han. (For further consideration of this point, see Osgood: 1934a: 176.)

Reference. Osgood (1932c).

Handbook. Under Hankutchin.

Name. From most widely known name by dropping the gratuitous ending. It is from the Kutchin designation.

HARE

Range. (Contact 1789; settlement ca. 1810 ?) Northwest of Great Bear Lake, a section of the lower Mackenzie River and its drainage, Northwest Territories. In recent years the

westernmost group of Hare extended their territory westward, crossing over the continental divide as far as the Lansing Creek trading post (on one of the headwater-tributaries of the Stewart River).

Comment. Petitot (1891: 362) subdivides them into six groups:

1. Nnè-lla-Gottinè—gens du Bout-du-Monde, ou Tpa-pa-Gottinè, gens de la Mer, Vieux de la Mer, Bâtards-Loucheux—Des rivages esquimaux au lac Simpson, le long du fleuve Anderson.

2. Kha-tchô-Gottinè, gens parmi les Lièvres, gens du Large, ou Natlé-tpa-Gottinè, gens parmi les Petits-Rennes—Parmi les grands lacs de l'intérieur, à l'est du Mackenzie.

3. Tchîn-tpa-Gottinè, gens du Bois, ou Kha-tpa-Gottinè, gens du Poil, gens parmi les Lapins—Le long du Bas-Mackenzie, au nord de Good-Hope.

4. Kfwè-tpa-Gottinè, gens des Montagnes—Le long du Bas-Mackenzie, au sud de Good-Hope.

5. Éta-tchô-Gottinè, gens de la Grosse Pointe, gens du Poil—Au nord et à l'ouest du grand lac des Ours.

6. Nni-Gottinè—gens de la Mousse—Le long du déversoir du lac des Ours.

My subdivision (Osgood, 1932a: 23 ff.) of the Hare does not correlate with Petitot's which fact leads me to a discussion of the complications involved in dealing with the subdivisions of the Northern Athapaskan groups as generally set forth. Petitot's Éta-tchô-Gottinè, or People of Big Point, refers to a group of Indians on Great Bear Lake. These people may be Hare by arbitrary definition (although they consider themselves Bear Lake Indians [Satudene]), but the point is that the term is only a place name and applicable to anyone who happens to be for the time living at Big Point. From definite statements of the Éta-tchô-Gottinè themselves, the term is not comparable to such as Kawchodinne (Hare), Satudene (Bear Lake), and Thlingchadinne (Dogrib), the latter all being mutually exclusive and unchangeable in application to a single individual. The frequent lack of correspondence in lists which designate divisions sometimes called bands, such as exists between mine and Petitot's, or the inconsistencies of Petitot's several lists, or the inconsistencies of my own informants, all these lead me to suspect that the reason lies in the mutability of these so-called bands.

Reference. None recommended.

Handbook. Under Kawchodinne for a summary of contradictory statements from the early sources.

Name. Unquestionably the most widely known name, although gratuitous.

INGALIK

Range. (Contact ca. 1829; settlement 1833 at Kolmakovsky near modern Georgetown on the Kuskokwim; contact 1834 and settlement ca. 1875 at Anvik on the Yukon river.) The area between Anvik and Holy Cross on the lower Yukon River, including the drainage

of the Anvik River, and the region southeast to the Kuskokwim River, including its drainage above Georgetown, west central Alaska.

Comment. I have subdivided the Ingalik as follows:

1. Anvik-Shageluk group—centering around the villages of the same names.
2. Bonasila group—centering around the village of the same name.
3. Holy Cross-Georgetown group—centering around the villages of the same names.
4. McGrath group—the people of the drainage of the upper Kuskokwim river.

The first three groups result from careful consideration by informants on linguistic and cultural evidence. The fourth group is arbitrarily included on the basis of available evidence and may, after further field study, prove a distinctive group.

Reference. Osgood (1934b).

Handbook. Under Inkalich for a single sentence (not under Ingalik which is said to be a synonym of Kaiyuhkhotana).

Name. Following most widely used name, excluding Tena as not distinctive. It is from the Eskimo designation.

KASKA

Range. (Contact ca. 1790; settlement ca. 1810 ? at Fort Nelson.) The general area of the drainage of the upper Liard River and its tributaries, northwest Canada.

Comment. This group includes the little known people of the upper Liard River drainage who have frequently been called Nahani; however, I have eliminated the latter term which has been used most indiscriminately as a label for Indians about whom little is known. Within this group are the Kaska proper, whom Jenness (1932: 396) subdivides as follows, and the Esbataottine:

1. Kaska proper—from about McDame Creek on Dease River to Beaver River which join the Liard River above Liard.
 - a. Tsezotene—Mountain people—on the west.
 - b. Titshotina—Big water people—on the east.
2. Esbataottine—Sheep Indians⁷—on the Beaver and south Nahanni Rivers.

Excluded from this group are the people of the upper Yukon River tributaries and of the Keele (Gravel) River.

Reference. None.

Handbook. No reference for this group.

Name. Arbitrarily adopting that of the most widely known subdivision as in the case of Carrier for the Carrier-Babine group, Tahltan for the Tahltan-Taku group. It is gratuitous.

⁷ Jenness (1932: 396) states that Esbataottine should be translated "Goat Indians," but linguistic analogies from Morice, Petitot, and Sapir, together with the widely accepted usage of "Sheep Indians" leads me to adopt the latter term.

Koyukon

Range. (Contact and settlement 1838 at Nulato.) The drainage of the Yukon River south of the mouth of the Tanana to about latitude 63° north, including the drainage of the Innoko River north of the latitude named, and of the Koyukuk River, in west central Alaska.

Comment. Except for the important error of including the Ingalik among his Kaiyuhkhotana, Dall's (1877: 25 ff.) three-fold subdivision of the lower Yukon Athapaskans was probably correct. These groups I now give as subdivisions:

1. Kaiyuhkhotana—the drainage of the Yukon River south of the mouth of the Koyukuk River to about latitude 63° north, including the drainage of the Innoko River north of the latitude named.

2. Koyukukhotana—the drainage of the Koyukuk River.

3. Yukonikhotana—the drainage of the Yukon River south of the mouth of the Tanana to the mouth of the Koyukuk River.

Another point of view would be to set subdivision 1 off against a combination of 2 and 3.

Reference. Jetté's unpublished manuscript.

Handbook. No reference for this group.

Name. I have chosen the term Koyukon, which, in the form of Coyoukon, was used by Whymper for the Indians of this general region. The origin of the name probably lies in that of the Koyukuk river, and it has the advantage of suggesting the Yukon river as well, besides being easy to pronounce, which Dall's terms are not. Another possible choice is Jetté's Tenas, which would be excellent except for the inevitable confusion with the whole Tinne-Dene-Dindjie series.

Kutchin

Range. (Contact 1789, settlement 1840 at Fort McPherson for the eastern groups; contact 1844, settlement 1847 at Fort Yukon for the western groups.) The region around the great bend of the Yukon River, eastward into the valley of the Mackenzie, north to the littoral of the Arctic Ocean held by the Eskimos, and south to roughly latitude 65° north.

Comment. The Kutchin have been subdivided into eight groups:

1. Yukon Flats Kutchin
2. Birch Creek Kutchin
3. Chandalar River Kutchin
4. Black River Kutchin
5. Crow River Kutchin
6. Upper Porcupine River Kutchin
7. Peel River Kutchin
8. Mackenzie Flats Kutchin

The names of these groups are self-descriptive in terms of their location. (For a detailed consideration of their distribution, see Osgood: 1934a.)⁸

Reference. Osgood (1932b); McKennan (1933).

Handbook. Under Kutchin for obsolete statement.

Name. Following Handbook as most widely recognized name, although Loucheux is almost equally well known. It follows their own designation.

MOUNTAIN

Range. (Contact ca. 1790; settlement ca. 1815 at Fort Norman.) The drainage of the Keele (Gravel) River, the region of Willow Lake, and the country between the Mackenzie River and Lakes La Martre, Grandin, and Taché. In comparatively recent years, some of the Mountain Indians have periodically crossed the continental divide into the country of the Pelly River.

Comment. Petitot (1891: 362) subdivides them into three groups:

1. Ehta-Gottinè—gens en l'air, gens de la Montagne. (The drainage of the Keele [Gravel] River.)
2. Klô-kkè-Gottinè—gens des Prairies. (The Mackenzie River above Fort Norman and the country between the river and Lakes La Martre, Grandin, and Taché.)
3. Kkpay-lon-Gottinè—gens du lac aux Saules. (The country northeast of Fort Norman centering at Willow Lake and including the Mackenzie River below Norman to Hare territory.)

The distribution of these three subdivisions, given in brackets, is given on my own authority but agrees for practical purposes with a compilation of statements made by Petitot.

Reference. None.

Handbook. No specific reference to this group.

Name. Following Petitot; the best known of the subdivisions, the Ehta-Gottinè or Citagottine, speak of themselves as "dwellers among the mountains."

NABESNA

Range. (Contact ca. 1885; settlement 1913 at Chisana.) The entire drainage of the Nabesna and Chisana Rivers, including the tributaries of the Tanana River, which they form at their confluence, as far down as the Tok River; the upper White River, including its tributaries the Beaver and Snag, and the headwaters of the Ladue; together an area roughly enclosed between 61°31' and 63°30' north latitude, and 141°30' and 143° west longitude.⁹

⁸ McKennan has since suggested the addition of a ninth subdivision to be called Dihai, a group which is said to have "formerly inhabited the territory about the north fork of the Chandalar and the middle and south forks of the Koyukuk rivers" (1935).

⁹ The information on the range of the Nabesna and that following on their subdivisions has been communicated to me by letter through the courtesy of Dr. Robert McKennan, who has made a detailed study of this group.

Comment. According to McKennan, the Nabesna are subdivided into four extremely fluid bands:

1. Ranged about Last Tetling Lake and the Tetling River.
2. Ranged about the mouth of the Nabesna River.
3. Ranged from the head of the Nabesna through the upper Chisana River to the White.
4. Ranged from Scottie Creek to the Snag.

Reference. McKennan (1929).

Handbook. Under Nabesnatana for a single sentence.

Name. Following Allen, with abbreviation. The designation is gratuitous.

NICOLA

Range. The valley of the Nicola River just below the lake of the same name in southern British Columbia.

Comment. The Nicola are an isolated Athapaskan-speaking group, included by definition in the area under consideration. There is little doubt that this group is now extinct, less than five members existing in 1895.

Reference. Teit in Boas (1895).

Handbook. Under Stuichamukh for summary of available information.

Name. Following most widely known name, a gratuitous one.

SARSI

Range. (Contact ca. 1789; settlement 1799 at Rocky Mountain House.) The drainage of the Athabasca River and south to the North Saskatchewan River. In recent years, the Sarsi have been settled on a reservation near Calgary, Alberta.

Comment. Wilson (1889: 242) subdivides them into two groups:

1. Blood Sarcees
2. Real Sarcees

Reference. Wilson (1889).

Handbook. See under Sarsi for satisfactory statement.

Name. Following Handbook in the spelling of only recognized name, which is the Blackfoot designation for these people.

SEKANI

Range. (Contact 1793; settlement 1805 at Hudson Hope and McLeod Lake). The drainage of Peace River and its tributaries above Hudson Hope, British Columbia.

Comment. Jenness (1931: 25 ff.) subdivides them into four groups as of the early nineteenth century:

1. Tsekani—Rock or Mountain People—occupied the country from McLeod Lake south to the divide, and east to the edge of the prairies.
2. Yutuwitcan—Lake People—occupied the country from the north end of McLeod

Lake down the Parsnip and Peace Rivers to Rocky Mountain Canyon; westward they extended to the head-waters of the Manson and Nation Rivers, including in their territory Carp Lake and the upper reaches of the Salmon River.

3. Sasuten—People of the Black Bear—all the basin of the Finlay River from the mouth of the Omineca north and west, including Thutade and Bear Lakes.

4. Tseloni—People of the End of the Rock or Mountain—the plateau country between the headwaters of the Finlay and Liard Rivers.

For an excellent detailed study of the distribution and subdivisions of the Sekani, Jenness' paper of 1931 is specifically recommended.

Reference. Jenness (1924b).

Handbook. Under Sekani for unreliable statement.

Name. Following Handbook as the most widely used name. It is their own designation.

SLAVE

Range. (Contact ca. 1780; settlement 1786 at Fort Resolution.) About the time of first European contact, the region of Slave River and the drainage of the western end of Great Slave Lake continuing some distance down the Mackenzie River. Since that time the Slave have pushed farther northwards and westwards.

Comment. Petitot (1891: 363) subdivides them into four groups:

1. Des-nèdhe-yapè-l'Ottinè—gens de la Grande Rivière d'en bas, ou Tpi-kka-Gottinè, gens sur l'Eau—Le long du Haut-Mackenzie.

2. Él'é-idlin-Gottinè—gens de la Fourche—au confluent de la rivière des Liards.

3. Ettchéri-dié-Gottinè—gens du Courant-fort—Le long de la rivière des Liards, et dans l'intérieur.

4. Étcha-Ottinè—gens à l'Abri—Entre la rivière des Liards et la terre du Partage, le long des rivières Noire, Castor, aux Saules et Mackenzie.

It may be mentioned that a group of Indians at the mouth of the Liard River are called Beaver by early writers. These belong to the Slave group and not to the Beaver of Peace River.

Reference. Jenness (1932: 389-92).

Handbook. Under Slaves for Petitot's early extended use of the term; under Etchareottine for a confusing statement.

Name. Following Jenness' spelling of most widely known name, which follows the Cree designation.

TAHLTAN

Range. (Contact 1834; settlement 1867 ?) The upper drainage of the Stikine River and extending to the headwaters of some of the neighboring streams including the Taku, northern British Columbia.

Comment. Emmons (1911: 5 ff.) considers the Tahltan as one of the four divisions of the Nahani, the others being the Taku and two divisions of the Kaska. The Kaska divisions

are grouped in this distribution under Kaska, however. The elimination of the Kaska leaves the dual division:

1. Tahltan proper
2. Taku

Teit (1915), on his map of the Tahltan, shows the six subdivisions listed below to which I have added a sentence indicating their general location:

1. Taxtlowedi—Headwaters of the Jennings River and extending eastward to include the headwaters of the Rancheria River.
2. Naloten—Headwaters of the Inklin River.
3. Talakoten—Headwaters of the Dease River (above Cottonwood River) including Dease Lake.
4. Tikaihoten—Drainage of the Stikine River between Iskut and Klappan Rivers, including Tuya River and Lake, but excepting the Stikine River itself below Telegraph Creek.
5. Tlepanoten—Drainage of the Klappan River and of the Stikine River above their junction; also of the uppermost reaches of the Skeena River. (According to Jenness, this area became more or less vacated by the last quarter of the nineteenth century and was then occupied by a mixed Sekani-Gitksan band called Tlotona Indians.)
6. Naskoten—Drainage of the upper Iskut and Nass Rivers.

Reference. Emmons (1911); also see Teit (1906).

Handbook. Under Tahltan for a summary by Emmons.

Name. Following the most widely known name, the origin of which is uncertain.

TANAINA

Range. (Contact 1778; settlement 1786 at St. George, modern Kaslof.) The drainage of Cook Inlet north of Seldovia (59°20' N. Lat.), the north half of Iliamna Lake and its drainage, including Clark Lake. Since contact, possibly slight incursions have been made into territory formerly occupied by the Eskimo, notably Seldovia Bay and portions of Iliamna Lake. General location—South central Alaska.

Comment. I have subdivided them into seven groups:

1. Lower Inlet—Seldovia and Kachemak Bay.
2. Middle Inlet—Tustamena, Skilak, and Kenai Lakes and the adjacent coast.
3. Upper Inlet—Knik arm of Cook Inlet and its drainage.
4. Susitna—Susitna River and drainage.
5. Tyonek—West coastal region of Cook Inlet.
6. Iliamna—Region of the north part of Iliamna Lake and its drainage.
7. Clark Lake—The region about Clark Lake.

Reference. Osgood (1931 and 1933).

Handbook. Under Knaiakhotana for useful statement.

Name. Following one of the terms most common in the literature and that by which the natives speak of themselves collectively.

TANANA

Range. (Contact ca. 1840; settlement ca. 1860 ?.) The drainage of the lower Tanana River below the Tok River, the region about the confluence of the Tanana and Yukon, and the region along the latter river above the confluence.

Comment. Allen (1887: 136 ff.) mentions two or three subdivisions on the lower Tanana. I would also include the Tatsa of the Yukon River who are now extinct and the Minchumina Lake people. This is done admittedly on very slight evidence.

Reference. None.

Handbook. No reference to this grouping.

Name. Following Allen, with abbreviation. The designation is gratuitous.

TSETSAUT

Range. The region about the head of Portland Canal, north coast of British Columbia.

Comment. This group has been distinguished because of the distinctiveness of their language from that of other Athapaskans who surround them. The Tsetsaut are almost certainly now extinct.

Reference. Boas (1895).

Handbook. Under Tsetsaut for brief statement.

Name. Following only recognized name, which is from the Tsimshian designation.

TUTCHONE

Range. (Contact 1840; settlement periodic from 1842 at Fort Pelly Banks; periodic from 1848 at Fort Selkirk.) The drainage of the Big Salmon, Pelly and Stuart Rivers, most of the White River, and that part of the Yukon River which connects them. General location—Yukon Territory.

Comment. This grouping serves as a collective reference for the little known Indians of the designated geographical area. They have sometimes been included with the Kutchin from whom they differ radically on linguistic grounds. They have also been included with the Kaska and Mountain Indians, which is illogical from a cultural basis. They are possibly most closely related to the Nabesna. Some of the original subdivisions, especially in the east, have probably become extinct through war and disease since the period of first contact.

Reference. None.

Handbook. Under Tutchonekutchin for a good selection of references.

Name. Following the Handbook and dropping the superfluous *kutchin* ending. The intention has been merely to pick the best known name specifically used within the defined area. It follows their own designation.

YELLOWKNIFE

Range. (Contact probably ca. 1750.) The country northeast of Great Slave and Great Bear Lakes including the drainage of the Upper Coppermine River. General location—Northwest Territories.

Comment. According to many statements of early writers, the Yellowknife were considered a branch of the Chipewyan. At the present time they speak the same dialect but Mason (p. 11) says, "There is a well-known tradition, vouched for by some of the old men of the tribe, that the Yellowknives abandoned their original speech and adopted that of the Chipewyans about a century ago. . . ." If only for the sake of convenience, it is wise to distinguish them, however, since their geographical position extends a great distance from the main body of Chipewyan and because they have been alluded to so frequently by early writers.

Reference. None.

Handbook. Under Tatsanottine for good summary of present knowledge.

Name. Following most widely used name, although it is gratuitous.

CULTURAL AND LINGUISTIC CLASSIFICATION WITHIN THE NORTHERN ATHAPASKAN AREA

Classifications of the Northern Athapaskan groups on the bases of culture and language are really needed. A few attempts have been made in the past for parts of the area or with very haphazard treatment of the Alaskan Athapaskans.

Petitot (1876: 26 ff.) first arranged them under four headings, and later (1891: 361 ff.) under eight. Morice (N.D.: 22 ff.) "for the sake of clearness" classified them in five groups. The above classifications have little to recommend them in the present state of our knowledge and further discussion here seems unnecessary, the bibliographic references to the detailed statements having been given for the benefit of those having further interest.

In his "Indians of Canada," Jenness (1932: 11) gives a map showing the cultural areas of Canada in which the Athapaskans (except the Sarsi) fall into two divisions, which he has named the "Tribes of the Cordillera" and the "Tribes of the Mackenzie and Yukon River basins." With due respect for his scholarship and on the basis of information which was not then available, I disagree with his disposition of the Athapaskans since a study of the recent evidence indicates that the people of the Yukon river basin should be placed with his "Tribes of the Cordillera," in so far as any division of the Canadian Athapaskans is to be made.¹⁰

Considering all the Northern Athapaskans collectively, there appears at the present time a two-fold cultural division, which I have indicated on my map by the —X— line. The distribution of groups into the two divisions follows in tabulated form:

Pacific Drainage Culture

Ahtena

Carrier

*Arctic Drainage Culture*¹¹

Bear Lake

Beaver

¹⁰ Jenness, to whom this paper was submitted in manuscript, has drawn my attention to a footnote in the volume mentioned in which he says, "Since this was written I have come to the conclusion that it would have been preferable to include the Kutchin among the Cordillera tribes rather than among those of the Mackenzie basin" (1932: 399).

¹¹ The Sarsi are omitted since they have clearly taken over Plains culture.

Pacific Drainage Culture (cont'd.)

Chilcotin
 Han
 Ingalik
 Koyukon
 Kutchin
 Nabesna
 Nicola
 Tahltan
 Tanaina
 Tanana
 Tsetsaut
 Tutchone

Arctic Drainage Culture (cont'd.)

Chipewyan
 Dogrib
 Hare
 Kaska
 Mountain
 Sekani
 Slave
 Yellowknife

The data on the basis of which I rest assured of this main cultural division of the Northern Athapaskans will be presented, I hope, within a reasonable time, for the detailed material in support of my thesis is far too extensive for inclusion in this paper. A few of the major points may be indicated in passing, however. There is generally among the groups of the Pacific drainage a dependence on salmon, which is entirely lacking among those of the Arctic drainage. With salmon fishing goes an elaborate complex of traits connected with the catching and use of this fish. A consideration of the types of shelter over the whole area brings to light a marked development of stable forms among the Pacific group in contrast to the more temporary forms of the other. This in itself may suggest the more sedentary social life of the Pacific division, in which we find also the unilateral kinship system as typical, a system as generally lacking among the Arctic group. Perhaps nothing stands out as sharply as the ceremonial life, including arts and games, in comparing the Pacific west with the Arctic east. In fact, the situation may be summed up by the statement that a consideration of over five hundred traits shows a generally decreasing complexity in the culture of the Northern Athapaskans from west to east with a sharply distinctive break between the relatively rich culture of the Pacific Drainage peoples and the essentially simple patterns of behavior of the aborigines of the Arctic east.

Linguistic classification within the Northern Athapaskan area is still for the most part extremely uncertain. I am indebted to Dr. Edward Sapir, whose authority is preëminent in this field, for the few statements and tentative suggestions which may be presented at this time. First, it appears certain that there are major linguistic divisions within the Northern Athapaskan area, which are individually equal in comparative weight to the whole Southern, or Pacific, Athapaskan division taken collectively. Linguistically, the difference between Ingalik and Chipewyan, or between Carrier and Sarsi, is as great a contrast as that between Chipewyan and Navaho. Whereas there is apparently a true linguistic unity in both the Southern and the Pacific Athapaskan divisions, the Northern Athapaskan area, as such, does not form a linguistic unit. Secondly, two languages of the Northern Athapaskan group, Kutchin and Tsetsaut, stand out from any further internal

alignment as individually distinct, the former being probably the most specialized of all Athapaskan languages. Finally, it seems probable that there are relationships among fifteen other groups which resolve themselves into six divisions beside the two given above. That these eight divisions given below are exactly comparable linguistic equivalents is not to be assumed:

1. Kutchin
2. Tsetsaut
3. Tanaina—Ingalik
4. Carrier—Chilcotin
5. Tahltan—Kaska
6. Sekani—Beaver—Sarsi
7. Chipewyan—Slave—Yellowknife
8. Dogrib—Bear Lake—Hare

Of the remaining eight groups, Koyukon, Tanana, Nabesna, Ahtena, Han, Tutchone, Mountain, and Nicola, nothing is certain concerning their classification. Ahtena may prove to be a distinct division by itself, and it is likely that most of the others are to be consolidated with the divisions numbered above as 3, 5, and 7.

It is greatly hoped that both linguistic and cultural research may be undertaken during the coming decade to bring to more definite conclusions, while still possible, some of the problems which have been mentioned. Such conclusions will have an important and far-reaching effect on the study of the whole of American culture.

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